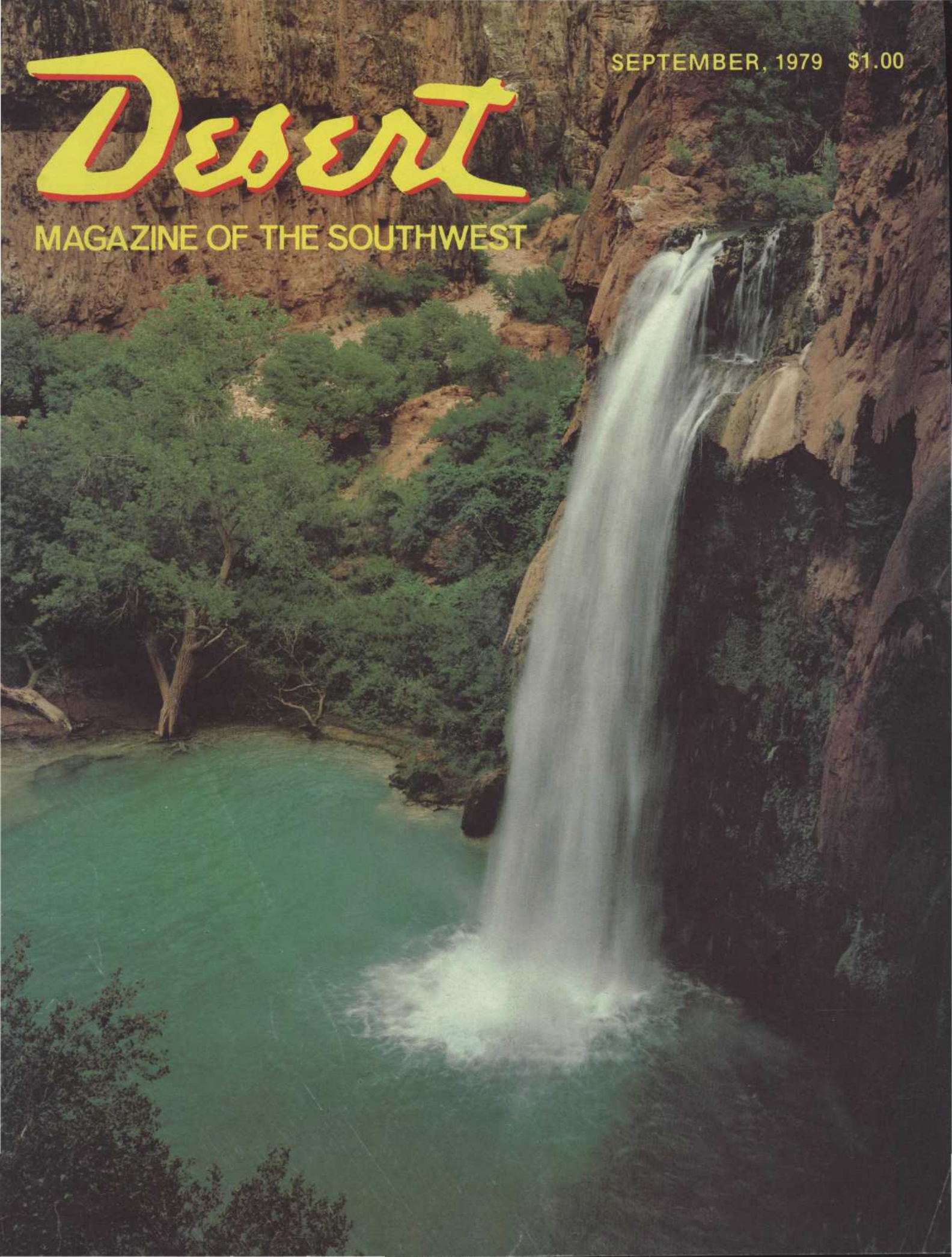


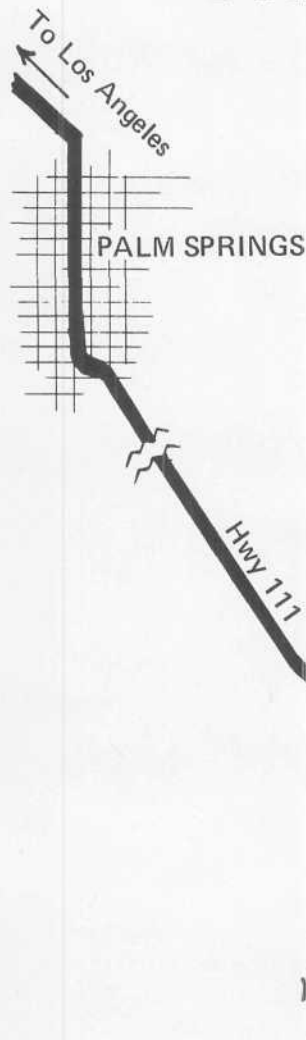
# Desert

MAGAZINE OF THE SOUTHWEST

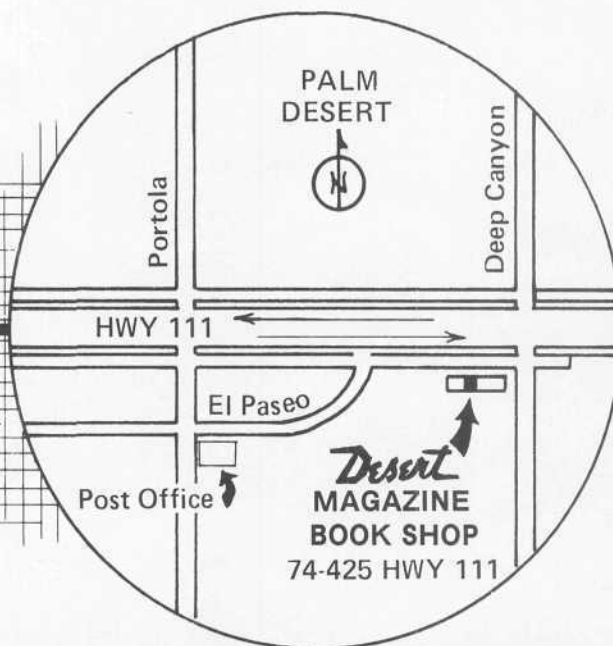
SEPTEMBER, 1979 \$1.00



# Come visit us...



**A GREAT  
SELECTION  
OF BOOKS  
ON THE WEST**



**STORE HOURS**  
Open 10:00 to 3:00  
Tuesday thru Friday  
Closed: Sat., Sun., & Mon.

**WESTERN ART  
NOTES PRINTS  
MAPS GOLD PANS  
GREETING CARDS  
AND  
A LARGE  
ASSORTMENT OF  
CURRENT AND  
OLD BACK ISSUES**



## *Desert* MAGAZINE BOOK SHOP

74-425 Highway 111 at Deep Canyon Road Palm Desert, California



WILLIAM and JOY KNYVETT  
Co-Publishers/Editors

GEORGE BRAGA, Art Director  
SHARLENE KNYVETT, Art Department  
MARY FRANCES STRONG, Field Trip Editor  
K. L. BOYNTON, Naturalist

Color Separations by  
Henry Color Service

Lithographed by  
Wolfer Printing Company, Inc.

Available in Microfilm by  
Xerox University Microfilms



(USPS 154-940)  
Volume 42, Number 9 SEPTEMBER 1979

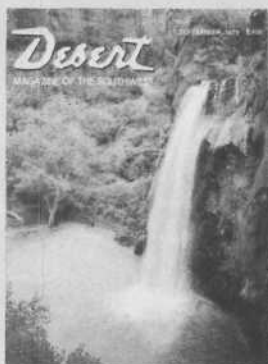
## CONTENTS

### FEATURES

HISTORIC CEDAR CITY	8	Mary Frances Strong
IDYLLWILD/SAN JACINTO MOUNTAINS	12	Bill Jennings
MESCAL BAJADA	16	Dick Bloomquist
ARCHEOLOGICAL STUDIES OF DESERT AREAS BY BLM	20	Tom Evans
HARQUA HALA, ARIZONA	24	James R. Mitchell
A CARNIVOROUS PLANT IN THE MOJAVE DESERT	28	Wayne P. Armstrong
FULL CIRCLE	32	R. G. Starling, Jr.
CALIFORNIA'S KANGAROO RATS	34	Jack Delaney
SOUTH FORK OF BOW WILLOW CANYON	38	Dick Bloomquist
WHAT'S COOKING ON THE DESERT? APPLES!	40	Stella Hughes

### DEPARTMENTS

A PEEK IN THE PUBLISHER'S POKE	4	Bill Jennings
NEW BOOKS FOR DESERT READERS	6	Book Reviews
TRADING POST	42	Classified Listings
BOOKS OF THE WEST	44	Mail Order Items
LETTERS TO THE EDITOR	47	Readers' Comments
CALENDAR OF WESTERN EVENTS	47	Club Activities



THE COVER:  
Beautiful Mooney Falls on  
Havasu Creek, Grand Can-  
yon, Arizona. Photo by Jona-  
than Berman, Sky Forest,  
California.

EDITORIAL, CIRCULATION AND ADVERTISING OFFICES: 74-425 Highway 111, P. O. Box 1318, Palm Desert, California 92260. Telephone Area Code 714 346-8144. SUBSCRIPTION RATES: United States and possessions; 1 year, \$9.00; 2 years, \$17.00; 3 years, \$25.00. All other countries add \$2.00 U. S. currency for each year. See Subscription Order Form in this issue. Allow five weeks for change of address and send both new and

old addresses with zip codes. DESERT Magazine is published monthly. Second class postage paid at Palm Desert, California and at additional mailing offices under Act of March 3, 1879. Contents copyrighted 1979 by Desert Magazine and permission to reproduce any or all contents must be secured in writing. Unsolicited manuscripts and photographs will not be returned unless accompanied by self-addressed, stamped envelope.

# A Peek in the Publisher's Poke

**This month, author Bill Jennings writes a special tribute to one of our retiring state park rangers.**

**T**HE MAN who perhaps more than any other has symbolized the patient, friendly, helpful and knowledgeable state park ranger for the past 20 years has retired at Anza-Borrego Desert State Park. Somehow, the place won't seem the same to many of us.

It's unfair to the rest of the ranger force there and statewide to say that George Leetch's departure after a 30-year career will cause a permanent loss. After all, the park hasn't changed. It is still nearly 600,000 acres of sheer beauty, interspersed here and there with utter magnificence. There remains Maurice H. (call me Bud) Getty, area or park manager and in his own amiable and highly professional way Bud is Mr. Park as much as George, plus a staff of excellent people.

But there is a void that can't be filled, only worked around and adjusted to. George Leetch was the ranger's ranger as well as the visitor's ranger. Therefore there won't be much petty jealousy or vanity, wounded egos and bruised facades when writers say nice things about George.

Leetch joined the friendly parks system in 1958, serving a brief apprenticeship at Mt. San Jacinto and Salton Sea before beginning a remarkable love affair with Anza-Borrego in 1959. He was separated from the desert empire only briefly, from 1969 through the early 1970s when he sojourned briefly at Mitchell Caverns and the San Diego beaches.

If you want to read an official biography, call Dora Teale at the park office,



(714) 767-5311. If there is enough demand, the park's semi-official historian, retired reporter Joe Stone, will whomp one up, with my dubious help, and the park will mail it out for a contribution to the visitor center fund.

What I'm writing here is about a friendship nearly as long, convoluted and as interesting as George's tenure in the park family, so you will have to pardon me if this guest Poke gets a little personal.

Because George was as much of great service to me, a desert varnished old vagrant, as he was to the newest neophyte of off-freeway travel, and just as courteous, even when I did dumb things you could overlook in a beginner but never forgive from a veteran. As getting stuck, or getting stuck a second time, or a third, and so on.

George has a middle name that you can get from Dora, or Bud, or Joe, but it should have been his motto: "May I be of service?"

Service has been the key word that turned him on for 31 years. He has worked a 40-hour week of course, as any good loyal state employee, but he never remembered to turn off his mental radio after going out of service at the end of the work day.

Many of his brightest accomplishments occurred on days off, after hours, on compensated time off, vacations, and probably will continue to do so, because

George and his very special partner, wife Jean, plan to remain deep in the heart of the park's south half, making their home in a modestly-sized masonry block house that is filled with great hospitality. This is at Canebrake, one of the few enclaves of private land south of Scissors Crossing.

Right now they are tailing off a Canadian Rockies vacation and I'm sure that George is uncomfortable amidst all that water and summer greenery, yearning for some sunbaked sand, parched smoke trees and a lizard or two in place of the moose, mountain goats, bighorns and the botanical extravaganza they're enjoying.

They'll make up for it, because as soon as they unpack their mildewed khakis and renew their suntans they'll be off to deepest Baja California, their second home, winter and summer.

They'll stop off between San Felipe and Puertocito along the Sea of Cortez to visit Frank and Mary Fairchild, another veteran Anza-Borrego official couple of years past. Come to think of it, other writers said the same irreplaceable things about Frank when he retired, and the parks, beaches, historic sites and the paperwork haven't languished. Maybe we can survive somewhat without George, too.

Leetch had a colorful background to qualify as a ranger, including heavyweight boxing, restaurant running and



*Fifteen years ago, when George was managing his Gorgeous Gorge at Split Mountain in the Anza-Borrego Desert State Park, his friend, Hemet photographer, Walt Frisbie, made this picture for the Riverside Press-Enterprise. The hair is a little grayer; George sometimes wears glasses now; the park has retired the palm-thatched trailer residence-ranger station, but George is still trim in the waist.*

five years in the Army. He was a professional boxer in the late 1930s until he entered the Army in 1940 for that so-called one-year at \$21 a month engagement some of us well recall.

During the war George married Dorothy Beam, daughter of China missionaries, and perhaps that decided him to abandon his boxing career, despite 30 professional bouts, some with title contenders, and a winning percentage.

After the war, George garnered a degree in sociology at the University of California at Santa Barbara and knocked around in several short-term jobs before he joined the parks system in 1958.

All was prelude until George and Dorothy drew an assignment to the Anza-Borrego version of Siberia, as some thought. They moved into the little travel trailer under the palm-thatched ramada at Split Mountain, succeeding another park giant, Doug Bryce. Come to think of it, maybe all the AB rangers are legendary characters, which is the mysterious ingredient in the successful formula that makes the California State Park System perhaps the best in the world.

At the Split, George and Dorothy became a living legend, enhanced by the third member of the little family, a tiny squirrel monkey whose name I have carefully forgotten over the years but which left scars I will bear to my grave.

The Leetch regime lasted 10 years, resulting in a semi-permanent ephithet for the place, "George's Gorgeous Gorge."

He won the Medal of Valor, California's highest award to a state employee, for a falling-rock punctuated rescue of bewildered campers trapped in the fault line confines of the canyon during a major earthquake in 1968. He also guided the unwary out of the rocky trap several times during spring and summer flash floods.

After the Split, George and Dorothy

rejoined the Fairchilds at Mitchell Caverns but it turned into tragedy when Dorothy became ill and died in a Needles hospital. George transferred to the San Diego beaches where a little luck introduced him to the widow of a longtime National Park Service ranger and in due time, George and his new wife, Jean, returned to Anza-Borrego.

This time it was for keeps, as far as George's 30-plus years park career was concerned. They lived for a time in Jean's sleek travel trailer at Butterfield, near George's new assignment in Blair Valley. The last several years of his tenure—before the Big Retirement Party at the Borrego Palm Canyon picnic grounds on June 16—was the Carrizo Corridor-Palm Spring sector of the Vallecito Wash drainage centered around Canebrake.

George is an infrequent contributor to this and other desert-oriented publications and now, Editor-Publisher Bill Knyvett has hopes that future issues will feature his by-line.

Maybe. But we'll bet George will still be pretty busy making rescues and entertaining park visitors with his own version of campfire talks on the wide front porch of his little house.

It's all history now, George's long love affair with Anza-Borrego, at least the official part, but I suspect they'll never get Jean and George out of the park, or the park out of them, besides, who would try?

There may be marriages made in heaven as the script writers grind it out, but there aren't many careers made in sand, or love affairs in ocotillo and jumping cholla. □

### FIRST CLASS MAIL-ORDER PHOTO DEVELOPING

Kodacolor and Fujicolor  
Print Film Developing Specialists  
Normal 12 exposure roll.....\$2.50  
With New Roll of Film.....\$3.80



Film returned by first class  
mail for FAST service.  
Send for price list.

**Your Reliable  
Mail Photofinisher**

**Market Basket Photo Service**

P. O. Box 2830, 1544 Frazee Road  
San Diego, California 92112

# BACK ISSUE BARGAINS!

## ODDS AND ENDS

**Miscellaneous Copies  
from 1959 to 1965  
Package of 10**

**\$3<sup>00</sup>**

**No selections available**

## VOLUMES FOR YEARS

**1966 • 1974**

**11 issues only**

**\$4<sup>00</sup>  
EACH**

## COMPLETE VOLUMES FOR YEARS

**1967 • 1968 • 1970  
1971 • 1972 • 1973  
and 1975**

**ONLY \$5<sup>00</sup> EACH**

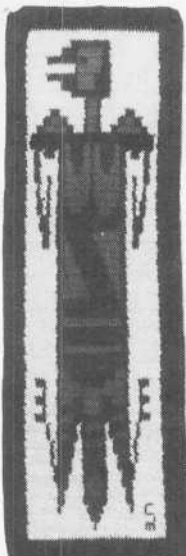
## COMPLETE

**1976 • 1977 • 1978**

**VOLUMES  
ONLY**

**\$6<sup>00</sup>  
EACH**

Send check or money order to  
**DESERT MAGAZINE**  
P. O. Box 1318  
Palm Desert, Calif. 92260



#### CROCHETED TAPESTRY

New and simple technique in basic double crochet creates this 12"x40" Thunderbird tapestry.

Pattern requires four skeins of yarn and a size "H" crochet hook. Shown in red and black on white, or you may select from other colors suggested.

Send \$3.50 (special price) for complete step-by-step instructions. Other patterns available.

Woven Stitch Crochet  
P.O. Box 212  
Alamogordo,  
New Mexico 88310

"Hopi" Thunderbird

### GENUINE DOMESTICATED GOLDEN CHIA SEEDS

(SALVIA COLUMBARIAE)

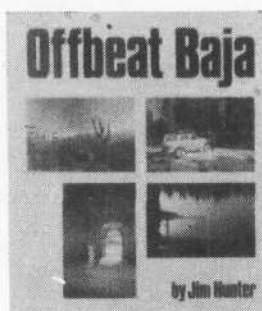
Sufficient for four 50-foot rows. Complete instructions. Packet: \$2.00.

HARRISON DOYLE  
P. O. Box 785  
Vista, California 92083

# Books for Desert Readers

BY BILL JENNINGS

All books reviewed are available through the Desert Magazine Book Shop. Please add 50¢ per total order for handling and California residents must include 6% state sales tax.



#### OFFBEAT BAJA By Jim Hunter

Over the years, there have been enough Baja "guidebooks" to pave those non-existent shoulders on the narrow ribbon of Mexico 1, the revolu-

tionary highway down the 1,000-mile length of the Baja California peninsula.

So it's a great relief to be able to recommend a new one, by a writer equally new to the Baja fraternity, Alaska Jim Hunter. In that inconsistency, Hunter offers a new look at and a new approach to the travel Baja cult, off the main road.

Hunter's offbeat guidebook is valuable for many reasons, not the least being the most accurate and least confusing mileage guides in recent years, as well as his instinctive regard for the people of the region, the people who either make or break your trip south.

Hunter is assisted greatly by the fine photography of Robert Western, who also contributed an excellent chapter on camera care and general photography, the best short synopsis on the subject for the Baja area we have ever read.

*Offbeat Baja* has only one drawback for oldtime guidebook readers—and users—one that most of his predecessors had also. The book will not lay flat on the seat, open to that vital page covering the particularly rough and steep stretch of rock and cholla you're navigating. Someday, somebody will print one with a spiral or plastic ring binding as the famous *Anza-Borrego Desert Guidebook*, a vital feature for the really working motorist who may not have a handy navigator sitting beside him.

Otherwise, *Offbeat Baja* is the best. It is as current as the several thousand miles of unpaved, ungraded Baja roads that really permit you to see the peninsula, not just the plastic places springing up along Mexico 1. Hunter makes a point that many of the old places are still there, perhaps better than ever, and you can get their pretty easily, particularly if you follow his road-condition grading system carefully. It fails only in that some of the four-wheel-drive categories he uses fail to consider those ubiquitous Baja bugs or other rebuilt lightweights that can generally do anything a four-wheeler can do except the deepest sand or the rockiest arroyo.

The writer here would add one item of equipment to the many advisories Hunter includes. Take a case or two of cheap 30-weight motor oil for trading and friendship purposes. Almost invariably those Mexican truckers you see broken down on the side or in the middle of the so-called road need oil and you'll get the best road advice or general as-

## TELLURIDE

"FROM PICK TO POWDER"

by  
Richard L. and Suzanne Fetter



ISBN 0-87004-265-3

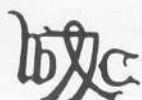
Paperbound

Approximately 160 Pages

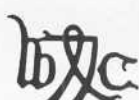
Many Photographs

\$4.95

Like much of Western history, Telluride's melodramatic character emerges from the exaggerated scale of people and events that made up its day. Here were men blasting a railroad out of solid rock, Big Billy the kindhearted madam, a world's first in power generation, a strike that angered the nation, and a daring bank robbery by a kid named Butch Cassidy and a group called the Wild Bunch. Telluride has not become a museum. Telluride today is very much alive, and as fine a living reminder of the Old West as one can find.



The CAXTON PRINTERS, Ltd.  
P.O. Box 700  
Caldwell, Idaho 83605





sistance available if you have a quart or two to hand them.

Hunter adds a section for motorcyclists, who have rights, too, although I would caution cyclists to carry plenty of water, even more than Hunter recommends, because you can get dehydrated and overly sunburned more quickly on a two-wheeler than any other way, and chances are you won't even know it.

All in all, an excellent guide, up-to-date, as much as you can be because Baja road conditions change overnight. Hunter offers an excellent directory to the *Offbeat Baja* you should visit, and is helpful to the *Turista Baja* as well.

Paperback, 156 pages, several basic maps, many excellent photographs, \$5.95.



## MARIA

By Richard L. Spivey

A book on Pueblo pottery, specifically San Ildefonso, that matches the beauty, the simplicity and the skill of that ceramic itself.

The title pays tribute to perhaps the greatest — or at least best known San Ildefonso artisan, Maria Montoya Martinez, but the book is more than a eulogy for this remarkable woman, still, at 90, the force and the power of the famed Pueblo pottery movement of the past 75 years. She has been producing that long herself, but as the author says, the pottery is a mutual product and she is perhaps the prime mover, but perhaps not.

Illustrations, mainly by Jerry Jacka, are up to the quality of the pottery, and the production of this book, its type-setting, layout, design and overall effect, are as good as the other ingredients. There have been many books on Indian artistry, and there will be many more, but few, if any, will be up to the standard of this product.

Maria Montoya was born in the little village by the Rio Grande, some 20 miles north of Santa Fe early in 1887. The only record is her baptism, April 5. She was married in 1904, her first husband being Julian Martinez, himself a major force in the re-emergence of San Ildefonso art-culture.

Maria and others of her tribe gained recognition for their pottery the first time at the St. Louis fair in 1904—the Louisiana Purchase Exposition. They had been hired to perform Pueblo dances but Maria and some of the other teenage women also made pots as a sort of sideline. There was instant fame!

Their visit perhaps awakened public interest in their work; it wasn't the only attention, not even the most important breakthrough. After all, the Pueblo people, just as California's Cahuilla, have been making pots as utilitarian home-making equipment for centuries.

The impetus for Pueblo pottery as art form, a very lucrative tribal industry, came somewhat after St. Louis, in 1907, when Dr. Edgar L. Hewett led "digs" in prehistoric Pueblo sites on the Pajaro Plateau, near the present-day site of Los Alamos. Maria's first husband, Julian, was among the workers.

They uncovered bits — sherds — of ancient decorated pottery, primarily polychrome. Hewett, through Julian, asked Maria if she could reproduce any of this work. The success was instant, and the work even better than the original. Hewett bought the first pieces and ordered more.

Over the next 70 years, Maria's aim was to re-establish an old Pueblo, particularly a Tewa, art form, not just as personal gain for herself and family, but for the entire group. She has taught children, grandchildren and now great-grandchildren. Her signed works may have been the product of several family members.

There are imitators, of course, but there are also those who have improved the form, just as Maria did with the work of her aunts and the ancients.

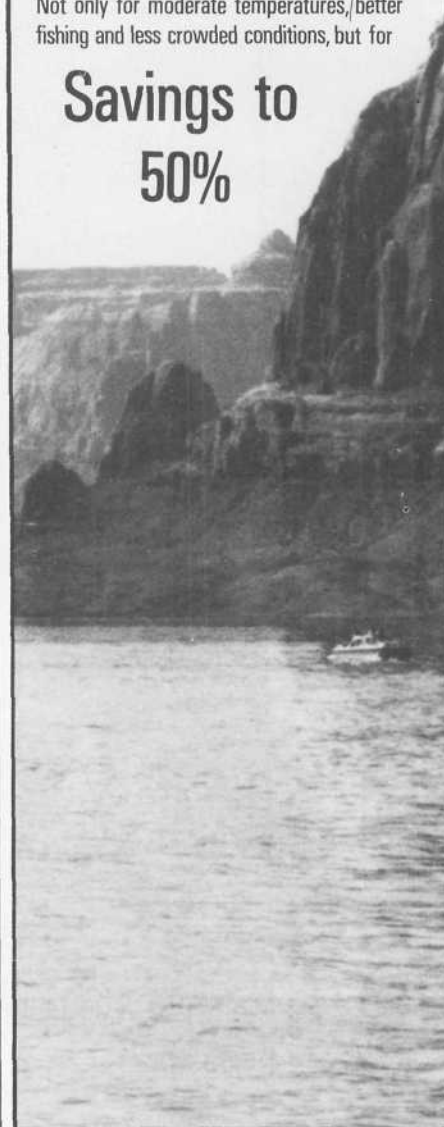
Values today are difficult to estimate. A Maria pot is worth whatever you have, you see. She has sold pieces for 50 cents and for several thousand dollars. Each is worth infinitely more than its purchase price to its owner. In spectacular hard cover, coffee table size, many color/black-white photos, 138 pages, \$27.50.

## LAKE POWELL OFF-SEASON IS JUST AS BEAUTIFUL

It's the greatest for summer family fun. Wahweap, Bullfrog and Hite resorts/marinas are open year around, *but you really should try us in the spring, fall and winter...*

Not only for moderate temperatures, better fishing and less crowded conditions, but for

## Savings to 50%



Send color and rate brochures on  
Wahweap, Bullfrog and Hite resorts/marinas

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Mail to:

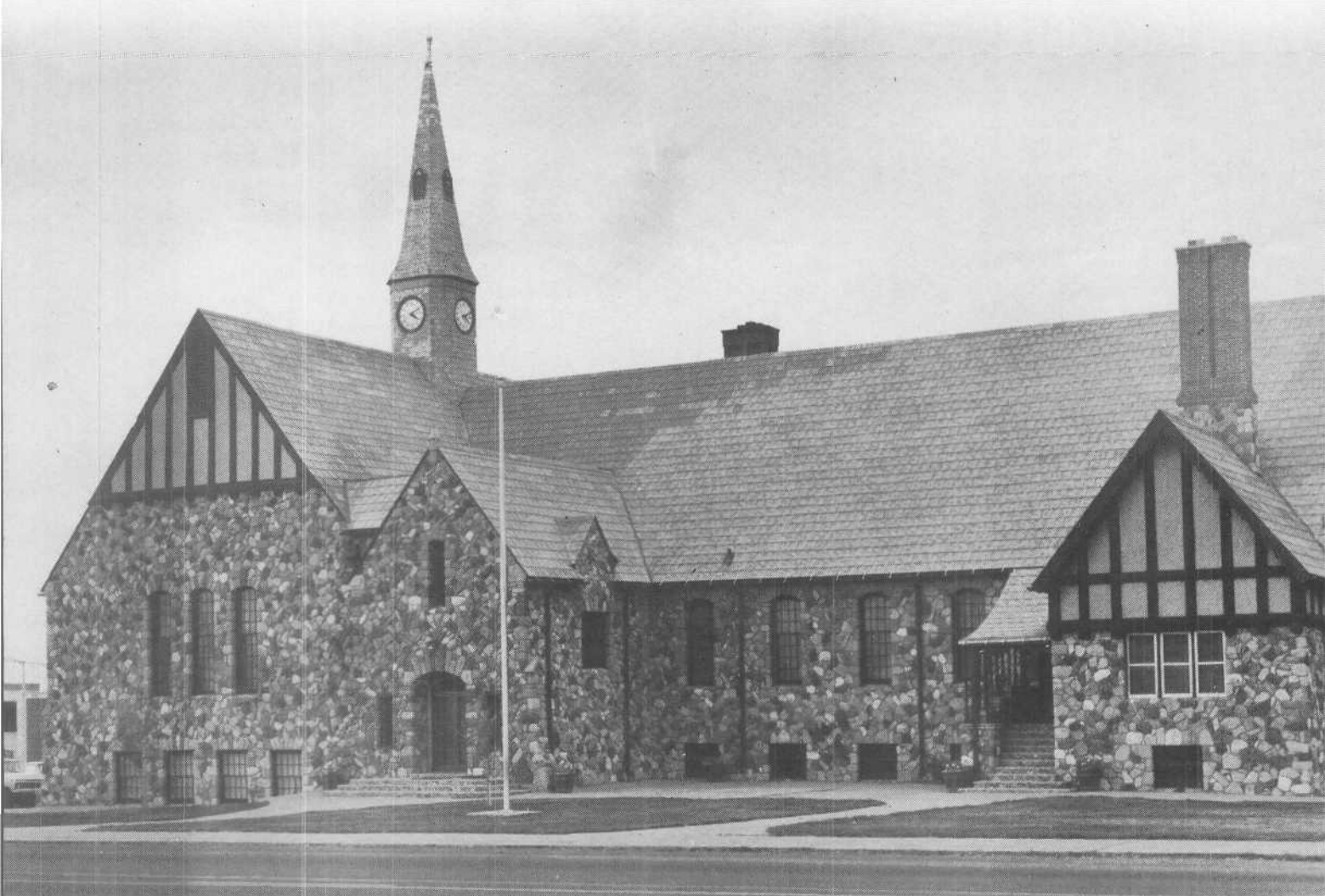
**Lake Powell Resorts & Marinas DM**

Box 29040, Phoenix, AZ 85038

New central reservations system:

West of Mississippi call toll-free 1-800-528-6154.

In Arizona, call (602) 264-8466.



*The Historic Mormon Church in downtown Cedar City is beautiful to behold. Built of native rocks, it contains many outstanding copper specimens that will quicken the heart-beat of a rock collector.*

# Historic Cedar City

by **MARY FRANCES STRONG**  
photos by **Jerry Strong**

**D**URING OUR TRAVELS through the Southwest, any "town stops" are usually quick overnights for restocking the larder and doing the laundry. Cedar City, in Southern Utah, proved to be an exception to this rule.

Known as an important mining center and rich in history; this 127-year-old town has become the hub of one of the state's finest outdoor recreation areas. What we had planned as an overnight stop stretched into more than a week. Yet, we had barely skimmed the surface of recreational possibilities in this fascinating region.

Cedar City is located at the base of a series of mountains and plateaus which march across Eastern Utah and culminate in the mighty Rocky Mountains of Colorado. The diversity of Utah's topography has led to its division into eight regions. Each has been named to appropriately characterize its individual attributes. Cedar City lies within "Color Country" — certainly a fitting title for Utah's southwestern corner.

Whether your interests are sightseeing, camping, rockhounding, fishing, exploring colorful National Parks or visiting geological and historic sites, you will find them all within a 40-mile radius of Cedar City. In this day of gasoline shortages and high cost thereof, a vacation spent in a central location offers many advantages.

While Cedar City has forged ahead into the 20th Century, the "old" has been protected and preserved. All the modern services deemed so necessary today rub elbows with the past. A fine college not only teaches but provides residents and tourists alike exposure to the Arts. Each year, an outstanding Shakespearean Drama Festival is held



during July and August which attracts visitors from all over the country. Write the Chamber of Commerce for a program of schedule and dates.

Before exploring the Cedar City Region, stop by the Chamber's Visitor Center. You will find it has a large variety of free brochures on all the area's recreational possibilities. The Bureau of Land Management office also has free brochures, maps and pamphlets, as well as several books of interest. We found both their staffs very friendly and helpful.

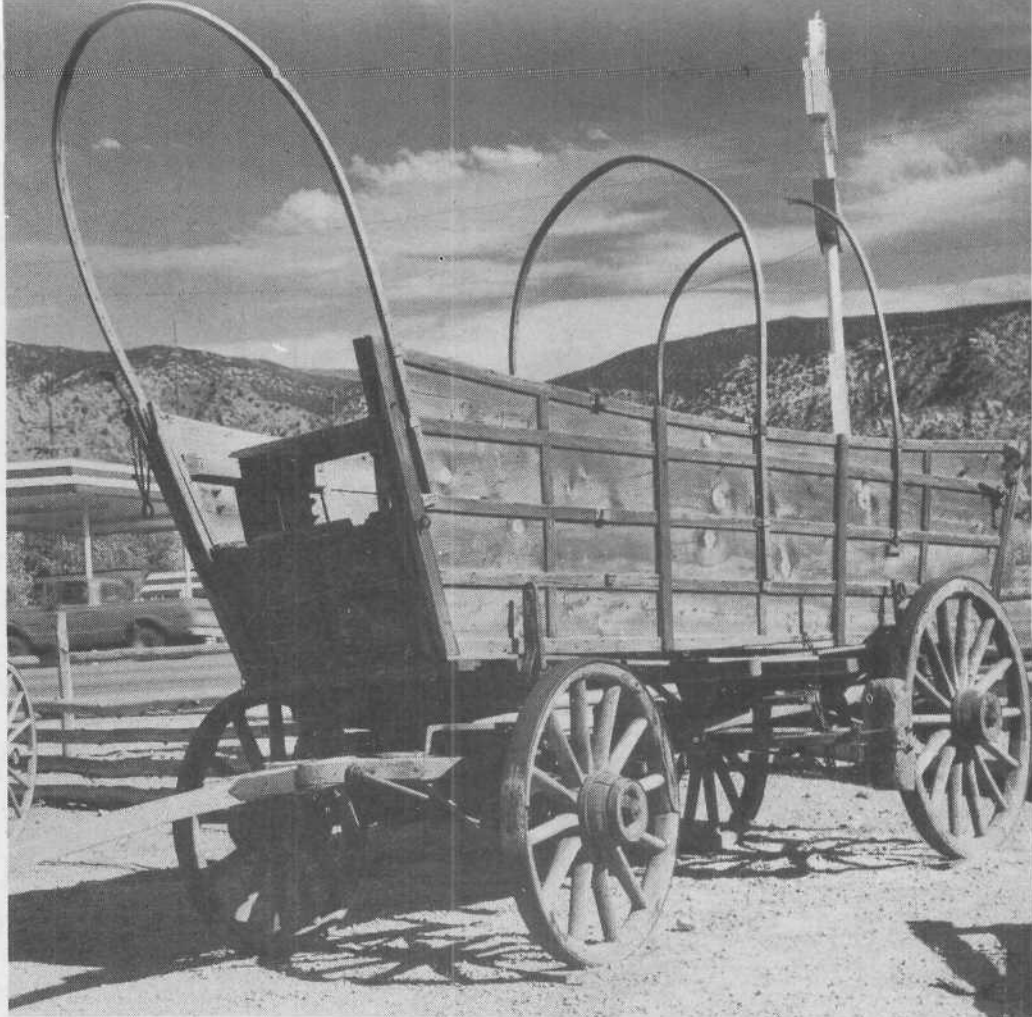
Downtown Park not only houses the Visitor Center, but offers a shady resting place and picnic area. Across the street, the attractive, old Union Pacific Railroad Depot sits in retirement. During the 1920s and '30s, thousands of tourists disembarked here, then boarded buses for a tour of a brilliantly-colored, sandstone amphitheater high on the Markagunt Plateau. We know the area today as Cedar Breaks National Monument.

The popularity of this service almost ceased in the late 1930s when a safe road was built to accommodate the burgeoning "automobile age." Fortunately, when the railroad abandoned the spur, the old station was preserved. There is an effort to possibly connect it to an arts and crafts center.

You will enjoy seeing and photographing the beautiful LDS Chapel in the downtown area. It is built of native stones — many of which are colorful copper specimens. The location of the church is shown as No. 18 on the accompanying Cedar City map.

A short distance north of the Visitor Center is Iron Mission State Park. It houses one of the finest, old-time wagon collections in the country. We found it fascinating to browse through this excellent assemblage of so many types of wagons — all from the pre-automobile era. Our favorite was a well-preserved milk delivery wagon.

Cedar City is located in Utah's Iron County and it was the need for iron that led to its settlement. In 1847 Brigham Young established the Mormons in Salt Lake Valley and his plans included the colonization of the surrounding country. These latter efforts were greatly frustrated by the lack of iron. Without iron tools, horseshoes, wagon wheels and other important items, colonists could not survive, much less develop new raw



*The Iron Mission Museum contains one of the finest antique wagon collections in the country. This is an old Conestoga—the original "motor home." Our favorite vehicle was the early-day milk delivery wagon. Some of our readers are sure to remember similar wagons since horses were used for years following the automobile.*



lands. In fact, the shortage of this necessary metal was threatening the development of the main colony in Salt Lake Valley.

Iron ore had been discovered in Cedar Valley as early as 1847 by Captain Jefferson Hart — a Mormon Battalion Volunteer. However, it wasn't until 1849, when the need for iron became critical, that Parley P. Pratt and his company of 50 men were commissioned to explore Southern Utah. Pratt's report of deep grasses, fine meadows, deposits of gypsum and limestone, with accessible timber nearby, led to Brigham Young's "calling" for 200 men to establish an "Iron Mission" in Cedar Valley.

Assembling in mid-December, under the leadership of Apostle George A. Smith, 167 men, women and children

began the month-long, 270-mile journey south. They made the trip safely in spite of bitter cold and snow-patched ground.

From their initial base camp on Cedar Creek, groups of men were sent out in every direction to explore the surrounding country. After evaluating the reports of the scouts, it was decided to set up a local government, hold an election and establish the settlement of Center Creek — now known as Parowan.

Almost immediately, these sturdy pioneers began building a fort. It would be needed in case any hostilities arose with the Indians. Land was cleared, irrigation ditches excavated and roads made into the timber country. Mill sites were selected and workshops set up. During a trip to the Pacific Coast in April 1851, Parley P. Pratt came through Center

Creek and found it a "flourishing community."

Coal was discovered in Cedar Canyon in May 1851. With iron orebodies nearby, it appeared the prospects for a successful iron industry were very good. At the time, Apostles Erastus Snow and Franklin D. Richards were on missions in England. They were advised of this development and, in 1852, organized the Deseret Iron Company in Liverpool, England. A "call" was immediately circulated among the Mormon steel and iron workers in England and Wales to migrate to the United States. Their help was needed to develop Utah's iron industry. The call was answered.

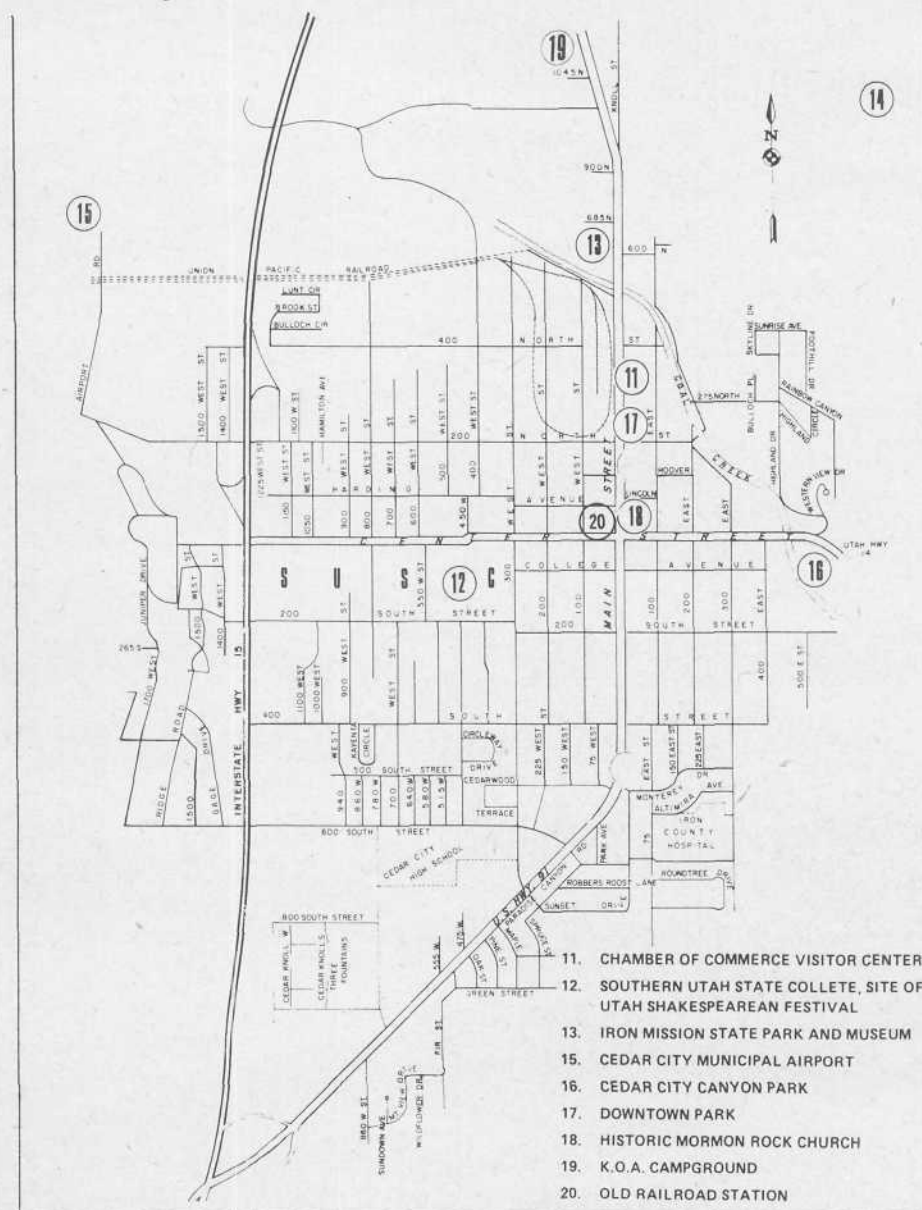
Parowan became the seat of newly-established Iron County. It, as well as the new settlements of Paragonah and Coal Creek (now Cedar City), became "home" to the many immigrant workers. In a very short time, two foundries were working and the iron industry appeared to have a bright future.

The following year, Indian problems began in the north and spread to Southern Utah. Chief Walker led raiding parties on the settlements, mainly stealing horses and cattle. Brigham Young dispatched a Mormon Battalion against the marauders and declared martial law. Outlying ranches and settlements were ordered to band together in the larger towns.

This abandonment of ranches and removal of livestock was a blow to Chief Walker. He sent a message to Colonel George Smith, Parowan's Military Commander, stating the Mormons were fools for abandoning homes and towns, for he did not intend to molest them. His intent was to only take their livestock! He also advised them to return and tend their crops, for if they neglected them, they would starve and be obliged to leave the country. This was not what he desired, for then there would be no livestock to steal.

Hostilities ceased, the settlements flourished but the iron industry began to falter. It was purchased by Apostles Snow and Richards as ordered by Brigham Young. A new furnace was built and other improvements made. However, when the railroads came to Utah, iron could be purchased and shipped from other sources for less cost than Cedar City iron. There had also been technical problems and furnace failures. The

## Cedar City





industry limped along for several years before mining and milling operations ceased.

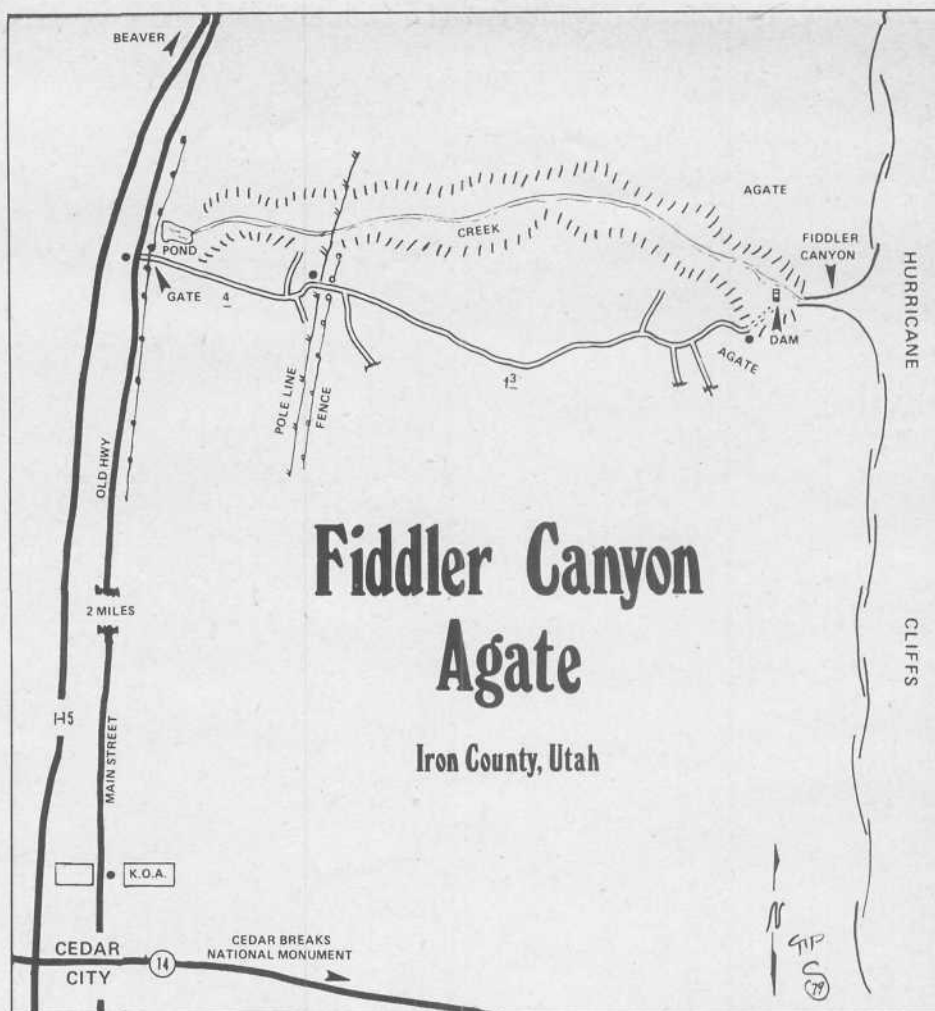
During a visit to "Coal Creek," Brigham Young had warned the Saints to move to higher ground or they would not escape the rampaging floods that often came down the canyon. Town lots were surveyed, though these hardy pioneers didn't complete the move until 1861. The new location was named "Cedar City" after the large junipers (mistakenly thought to be cedars) that grew in the area.

Loss of the coal industry brought hard times for the townsfolk. Fortunately, a rich gold strike at Delamar, Nevada, followed by the great silver strike at Pioche, found all types of supplies in demand. The fortunes of Cedar City quickly changed as ranchers hauled wagon loads of beef, produce, lumber and other vital supplies to the new strikes.

The coming of the railroad to Lund, in 1869, made possible the shipping of goods throughout the state. There was just one drawback — a good road to the depot at Lund, 32 miles northwest of Cedar City, did not exist. Eleven years would pass before an improved road would finally be completed in 1880. Cedar City had begun to grow and was now assured of continued progress. Today, this small, attractive town offers the best in family living, a fine college, exposure to the Arts, as well as an outstanding variety of recreational activities.

"Southwestern Utah, Multipurpose Map No. 5," is a must for exploring Cedar City environs. It is available for a small fee at the Chamber's Visitor Center. The map is large-scale and symbols indicate every possible locale a vacationer might enjoy. The problem becomes "where to start?" Naturally, this depends on your personal interests. Why not follow the example of the first settlers? Fan out in all directions — you will "sample" the field this way.

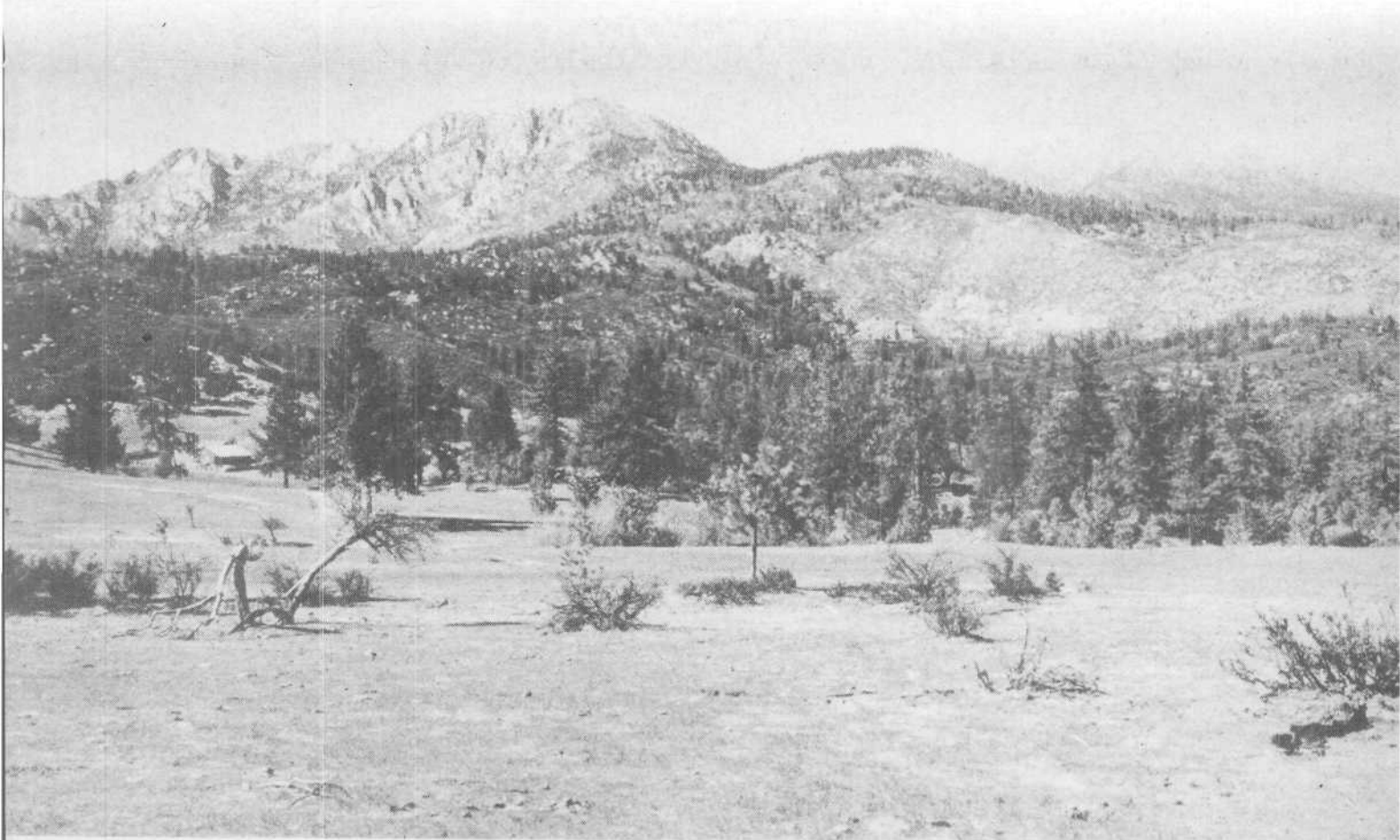
During our stay in Cedar City, Jerry and I spent a day collecting agates in Fiddler Canyon. From the K.O.A. Campground, we traveled north on Main Street (the old highway) for two miles then turned east (right) through a gate. If you see a pond, you are on the right road! (Check accompanying map.) The road is rather poor but passable for stock cars. It wanders through junipers and



*This is a good place to park and search the slopes for colorful agate. The dirt road, seen here, drops 40 feet [steep and rough] into the creekbed and ends at the old dam.*



*Continued on Page 39*



# Idyllwild/San Jacinto Mountains

by BILL JENNINGS

*Old picture of Garner Valley area [above] of San Jacinto Mountains, taken before much development had occurred. San Jacinto peak is in background at right. Motorists frequently pause for a cooling drink of spring water at Halfway Spring [below] on old Idyllwild Control Road from Hemet to San Jacinto Mountains resort region.*



**P**RESENT-DAY DENIZENS call it the Hill, but it may be hard for some to associate 10,000-foot summits with perpetual snow crevasses with a hill, so we will stick to the beautiful region's proper title, the San Jacinto Mountains, our destination for a weekend or week's tour.

Less than a century ago, the only residents of and visitors to the beautiful high country midriff of what is now Riverside County were Indians, a few cattlemen and miners, with a sprinkling of loggers and health seekers. Today, the San Jacintos still have Indians, a few cattlemen and miners, no sprinkling of loggers but a growing permanent and weekend population of healthseeking Southern Californians.

When we think of the pine-clad, clear-air, highly scenic region we generally think of its principal community, mile-high Idyllwild, with its satellites, Pine Cove and Mountain Center and the growing residential outlands of Garner and Anza valleys to the south and southwest.



Idyllwild's history is tangled, although relatively brief. As a town with the present name it didn't exist until 1899 when the postoffice was established. Before that, the general area was known variously as Rayneta, Saunders Meadow, Strawberry Valley and even, for a brief time, Dutch Flat.

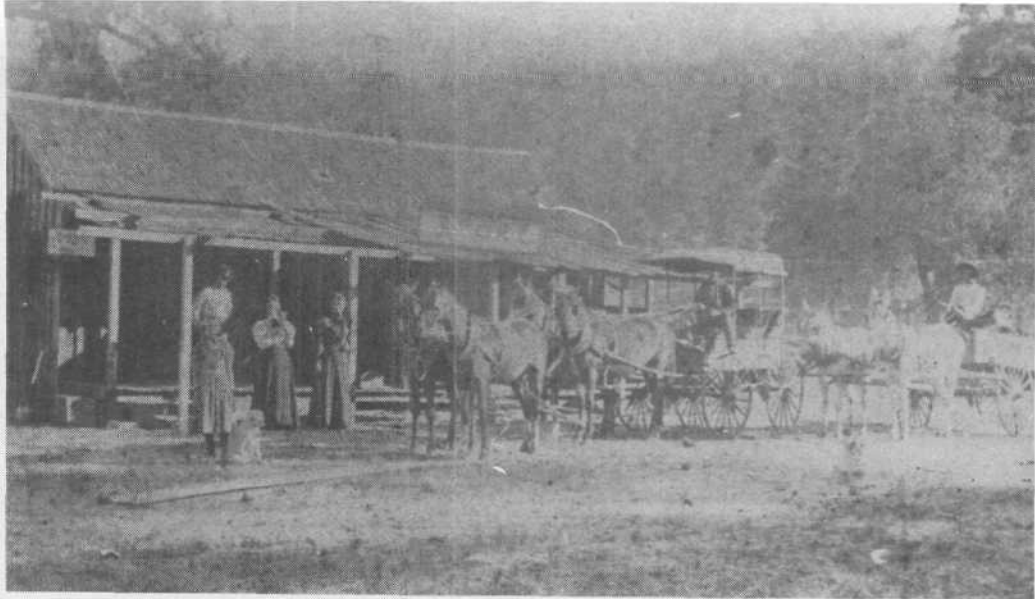
The first organized non-Indian users of the massive uplift of granite that serves as a bulwark between the coastal foothills and the desert valleys were probably lumbermen, although some of the remaining glory holes and aborted mining shafts and tunnels hint that gold seekers perhaps came ahead of the 1870-era loggers. The timber hunters originally sought suitable fuel, tie and bridge materials for the Southern Pacific Railroad, which was building eastward from Los Angeles to Arizona. The first mountain settlement, in fact, was named Hall's Camp or Hall City for an elusive figure, M.S. Hall, who affected the title "Colonel," reportedly from Civil War duty. Hall had a grading contract for the line through the San Geronio Pass.

In 1875, at about the same time Hall was building a wagon road and logging flume from the present site of Cabazon up the mountain to about where Lake Fulmor is today, another road was being carved out of the rocky gorge of the San Jacinto River on the west side of the mountain.

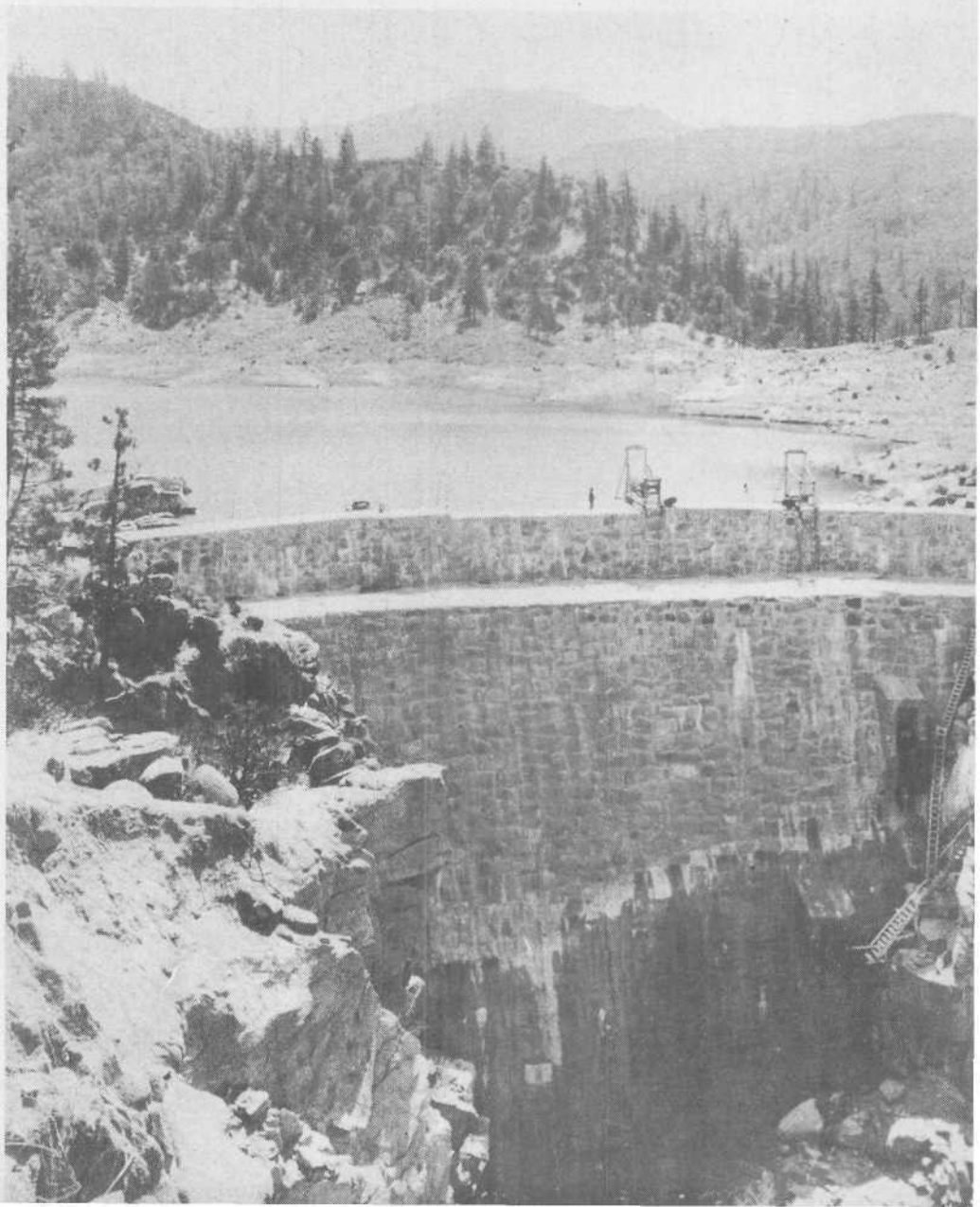
This was Joseph Crawford's original toll road from the San Jacinto Valley to Strawberry Valley, roughly the site of present-day Idyllwild. Lumbermen, a daily stage, miners and homesteaders were his few customers. Traces of this old road and the Oak Cliff relay station in the San Jacinto canyon remain today midway between Hemet and Mountain Center.

There was no road up from the Coachella Valley in the early years, and no need for one because the only hamlet before the railroad reached the desert was the little Indian village of Agua Caliente, later named Palm Springs when that area also became a health retreat in about 1885.

The first permanent settlers in the San Jacintos were neither loggers nor gold seekers but Mexican-Anglo cattlemen. Charles Thomas moved his family from the old Indian-Mexican settlement of Temecula to the meadows of the San Jacinto River's south fork in about 1869. The lush pasturage with its pine borders



*The Keen Camp resort [above], high in the San Jacinto Mountains and a popular spot in the 1890s and early days of this century, is now a Girl Scout camp. Masonry and concrete dam [below] at Lake Hemet in the San Jacinto Mountains was an engineering marvel of the world when built in 1890-1895. Dam impounds farm irrigation waters of the San Jacinto River for the Hemet area.*





*Horse Thief Creek crossing on the historic Bautista Canyon trail, later a wagon road and now a fire truck trail.*

later became known as Thomas Valley and today is called Garner Valley after the family that bought the Thomas ranch in 1903.

Thus it is that few of the original names remain to mark the landmarks and communities of the San Jacintos today. Thomas Mountain, a promontory to the west of Garner Valley, is an exception.

Riverside County came into being in 1893, carved by the State Legislature mostly out of San Diego County to the south and a long sliver from San Bernardino County to the north and west.

There is some indication that Idyllwild and the rapidly expanding resort residential areas of the San Jacinto Mountains today owe most of their allegiance to the coastal counties of Orange and Los Angeles. At least that's where many of the new residents sprang from and many of the growing cultural connections seem to trend from the metropolitan area as well.

For example, there is the Idyllwild campus of the University of Southern California, located in the heart of Strawberry Valley where the first health camps and much of the early-day logging were centered. Known until just a few years ago as ISOMATA — the Idyllwild School of Music and the Arts — the lovely campus today is a year-around adjunct of USC instead of a summer-school

season retreat for visiting professors from all over the world.

Known either as ISOMATA or the Idyllwild Arts Foundation, the campus was established in 1946 as a non-profit educational institute and served as a haven for the arts — read that as music, fine arts, poetry, creative writing, drama — offering university-level credit for teachers and graduate students as well as a lovely summer session for youngsters. Dr. Max Krone and his wife, Bea, were the dynamic force behind the successful program.

In addition to the university's secluded campus, re-named in 1962, the meadows has long been the home for the Riverside County Boy Scout camping program at Camp Emerson, named for the late Lee Emerson, longtime director of the old Idyllwild Inn and other facilities of the original major Idyllwild developers.

Hardy Scouts are an echo of another long-gone Idyllwild institution located further out on the long bench bisected by Strawberry Creek before it makes the steep dropoff to join the San Jacinto River far below. This area, also known as Alvin Meadows, was the site of the mountains' old CCC camp, established in 1936.

Adjacent is Chimney Flats, complete to a chimney dating to the CCC days, and the still usable portion of the 1912-

era control road that reached Halfway Spring and joined the present paved road — State Highway 74 — at the site of Oak Cliff.

(Author's Note: In all, there were three old roads into the Idyllwild area from the Hemet side of the mountain before the present state highway was completed in the 1920s. The first, the Saunders Meadow logging toll road built by Crawford, was established in 1875; the second, or original control — one-way — road was built in 1891 to Keen Camp near present-day Mountain Center and the third, the final control road, followed in 1912. All used the lower San Jacinto River Canyon for the first half of the journey and separated at Oak Cliff, 12 miles east of Hemet.)

The heart of present-day Idyllwild is nearly two miles further up Strawberry Creek from the USC-Boy Scouts area, bordered more or less by Circle Drive and flanked by the two sites of the old Idyllwild Inn, the original hotel.

It probably is of no concern today save to old historians, but when you write about the Idyllwild Inn you have to distinguish between two historic structures, at adjacent sites, both long gone. The first Idyllwild Inn, built in about 1900 and demolished during World War II after a major fire, was located in what is now described as Eleanor Park, a tract donated to the community some years ago by the family of the late Jerry Johnson, an early real estate man.

The second Inn, just across the street, was erected by the Foster interests in 1945 and was torn down in early 1976 after the beautiful building was condemned as a fire and safety hazard.

Because of the original design and layout of the two inns, the present community has developed in a sort of town square around the sites, which gives Idyllwild a community flavor and distinction seldom found in 1979 Southern California towns.

A complete shopping complex has built up around the two inn sites and another, generally described as Fern Valley, is another half-mile up Strawberry Creek. As Idyllwild continues to grow, the two shopping areas are gradually blending together.



*Solitary hiker nears the summit of Devil's Slide trail above Idyllwild in the San Jacinto Mountains wilderness area.*

Partially because of its proximity to Hollywood and more importantly because of its smog-free atmosphere and photogenic citizens, Idyllwild and environs has long been a favorite "location" shooting site for films and most recently, television shows and commercials. The local residents have just as long been handy extras for the crowd scenes.

Many television series, for example, used the San Jacinto Mountains for location filming, particularly Garner Valley and the business area of Idyllwild — and this exotic part-time industry continues irregularly. Richard Boone's *This Gun For Hire* was a regular, and one of Idyllwild's best remembered golden moments occurred when the late Elvis Presley filmed there. Another visitor at times was Lucille Ball.

But the main attraction for nearly a century now has been the vest-pocket mountain enclave's scenery, resulting in heavy seasonal activity by campers, hikers and health seekers. Paradoxically, mountain winter sports have never been a major item because of the unpredictable quality and quantity of snow. The past three winters have produced excellent skiing conditions but there are no lifts in the area. Cross country skiing, however, is gaining in popularity.

Enhancing the area's recreational potential the past 16 years has been the Palm Springs Aerial Tramway. Not generally associated with the mountain area, the 6,000-foot, two-mile tramway opened in 1963 as a prime tourist attraction for the desert resort area, but also has provided a side benefit for the Idyllwild region.

Many back country hikers, particularly those on tight schedules, have used the tramway as a giant first step toward scaling Mt. San Jacinto and reaching other back country camping and hiking areas. The tram reaches an elevation of 8,516 feet at its mountain terminal, slightly more than 2,000 feet and only four miles below the summit. By comparison, the Humber Park terminus of the Devil's Slide trail on the other side of the mountain above Idyllwild is 7,000 feet and nearly 10 miles away from the 10,831-foot peak.



Thus, hikers make a one-day loop trip, from Humber Park to the tramway via the peak, or vice versa.

Camping and hiking areas in the high country are mostly in either the San Bernardino National Forest or the Mt. San Jacinto Wilderness State Park. Together, these entwined areas encompass more than 260,000 acres, of which more than 35,000 acres is designated as permanently roadless and unimproved wilderness — a primary tourist attraction for Idyllwild and the other mountain communities.

Federal and state campgrounds are plentiful in the mountain area but their availability and easy access from the Los Angeles-Orange County metropolitan area makes them prone to over-crowding. As a result, even back country hiking and camping now require reservations, available through the Idyllwild offices of the U.S. Forest Services and the state park.

There are many other overnight accommodations, ranging from car camping sites maintained by the two agencies and Riverside County to full-service, even palatial motels at several locations. The major public-use, privately owned campgrounds is a beautiful meadow and forest site at Pine Cove, four miles up State Highway 243 from Idyllwild on the way to Banning.

This is Wilderness Pines, with tent and recreational vehicle spaces available on reservation. There are other, smaller installations mainly in the Anza-Terwilli-

ger area, 20 miles southwest of Idyllwild on State Highway 371, the main detour route connecting Palm Springs and San Diego.

Many private campgrounds persist in the area, although not as numerous as in earlier years. These include sites owned by the Boy and Girl Scouts, several YMCA and YWCA agencies and a half-dozen church denominational retreats.

Primary roads into the San Jacintos are all two-lane, strictly mountain type arteries, prone to infrequent icing and chain requirements in winter, but generally open all year. From Hemet, the main route is State Highway 74, usually called the Palms-to-Pines, an original unit of the State Scenic Highway System. It runs from Palm Desert, 13 miles southeast of Palm Springs, into the San Jacinto range, through Hemet, Perris and Lake Elsinore, over the Ortega Divide and across the Santa Ana Mountains to its western terminus at San Juan Capistrano.

The primary north-south route is a mixture of Several state highways (SRs), SR 243 from Interstate 10 at Banning south through Lake Fulmore, Pine Cove and Idyllwild to Mountain Center, where it joins SR 74 briefly for a 10-mile joint routing to the Anza junction, a line there with SR 371 then through Anza to Aguanga where it ends at State Highway 79. Riverside County's highest road also joins the system near Anza junction. This is Forest Service Route 7S02, the

*Continued on Page 39*

# MESCAL BAJADA

by DICK BLOOMQUIST







**M**ESCAL BAJADA — the name may be unfamiliar to many. It is made up of the Spanish words *mescal*, meaning century plant or agave, and *bajada*, literally a slope or downgrade. In the Southwest, *bajada* is the word for a sloping outwash plain at the foot of a desert mountain range. In desert country each canyon builds an alluvial fan below its mouth; when several of these fans coalesce, the result is a *bajada*. So, Mescal Bajada could be translated "Outwash Plain of the Century Plants."

It is located near the center of California's Anza-Borrego Desert State Park

and lies south of State Highway 78 between the Tamarisk Grove Campground on the west and the Narrows of San Felipe Creek on the east; it is bounded on the south by the Pinyon Mountains. Mescal Bajada is small and compact (roughly four miles wide by four miles long), but offers outstanding scenic beauty, intriguing washes and canyons, rich plant life, Indian signs, plus a bit of desert lore and legend.

The state park's Tamarisk Grove Campground, just beyond Mescal Bajada's northwest edge, makes a very convenient base camp. This small, improved

campground, shaded by tamarisk trees, is on County Road S3 a fraction of a mile off State Highway 78. A drive up S3 from Tamarisk Grove toward Yaqui Pass gives a rewarding preview of adventures ahead, for from the road the entire expanse of Mescal Bajada and its mountain backdrop spreads out in mystic splendor to the southeast.

Although it is bordered by a state highway, Mescal Bajada has an unspoiled freshness about it. It's pure and beautiful desert, with no roads, campgrounds, power lines or other works of man to break the spell. Some of the arroyos, however, do provide routes of travel for four-wheel-drives. The major ones, from west to east, are Chuckwalla Wash, Mine Canyon, and Pinyon Wash. Chuckwalla is about 2.0 miles east of the junction of 78 and S3. Mine is 2.9 miles east, and Pinyon 4.2 miles east. As you drive along Highway 78, watch for the yellow-and-brown state park guideposts where the road crosses the washes. Because they are designed for backcountry Jeepers and hikers, not for fast-moving highway motorists, these posts are small and inconspicuous.

Mine Canyon has long been one of my favorites, despite the fact that I've never been able to locate the abandoned mine which gave the canyon its name. Horace Parker, in his *Anza-Borrego Desert Guide Book*, states that the largest unsuccessful mine in the vicinity is in Mine Canyon. And Lester Reed, in *Old Time Cattlemen and Other Pioneers of the Anza-Borrego Area*, says that the mine is at the upper end of the canyon near the end of the Jeep road. Perhaps a reader can shed more light on its exact location and also tell us for what mineral the miners were searching.

I have traveled up Mine Canyon as far as a vehicle can go, and have also entered it on foot from the Earthquake Valley side to the southwest. The North Pinyon Mountain Jeep road branches off from County Road S2 in Earthquake Valley just inside the park boundary and ends at the headwaters of Mine Canyon. From there it is possible to hike down the canyon into Mescal Bajada. The *Anza-Borrego Desert Guide Book* indicates that this was once a natural travel route between Earthquake Valley and San Felipe Creek.

A little over a mile east of Mine Canyon, Highway 78 crosses Pinyon Wash,



# COOK BOOKS

For the outdoor enthusiast,  
and those who like to flavor  
their life with the unusual



**AMERICAN INDIAN FOOD AND LORE** by Carolyn Nelthammer. Original Indian plants used for foods, medicinal purposes, etc., described, plus unusual recipes. Large format, 191 pages, profusely illustrated, \$5.95.

**CHUCK WAGON COOKIN'** by Stella Hughes. Recipes collected straight from the source—cowboy cooks. Contains Mexican recipes, instructions for deep-pit barbecue and the art of using Dutch ovens for cooking everything from sourdough biscuits to Son-of-Gun stew. Paperback, 170 pages, \$4.95.

**DUTCH OVEN COOK BOOK** by Don Holm. New and exciting culinary adventures in Dutch Oven cooking. Heavy paperback, 106 pages, \$4.95.

**ARIZONA COOK BOOK** by Al and Mildred Fischer. Unusual recipes for Indian cooking, Mexican dishes, Western specialties. Unique collection. Paperback, 142 pages, \$3.00.

**De GRAZIA AND MEXICAN COOKERY**, illustrated by De Grazia, text by Rita Davenport. A delightful presentation containing all the favorite Mexican recipes that have become standard throughout the Southwest. Beautiful illustrations, in color, by the incomparable De Grazia. \$4.95.

**CACTUS COOK BOOK** compiled by Joyce L. Tate. An excellent selection of recipes that emphasize their edible or potable qualities. Also includes chapter on Food Preservation. Paperback, 127 pages, \$2.00.

**SOURDOUGH COOKBOOK** by Don and Myrtle Holm. How to make a sourdough starter, and many dozens of sourdough recipes. Paperback, 136 pages, illus., \$4.95.

**CITRUS COOK BOOK** by Glenda McGillis. An unusual and outstanding treasury of citrus cookery. Includes tips on freezing, juicing and shipping. Paperback, spiral bound, \$2.00.

**CALIFORNIA COOK BOOK** by Al and Mildred Fischer. Recipes divided into "Early California," "California Fruits," "California Products," "Sea Foods" and "Wine Cooking." 400 more unique collections by the Fischers. Paperback, 142 pages, \$3.00.

Please add 50c per total order  
for postage and handling

California residents please add 6% Sales tax

Send check or money order today to

**Desert Magazine Book Shop**

P. O. Box 1318  
Palm Desert, California 92260

the last arroyo draining Mescal Bajada and the Pinyon Mountains before the bajada's eastern end is reached at the Narrows. Pinyon also has two tributaries — Bighorn Canyon and Nolina Wash — which join it not far from the road. Bighorn Canyon is named for the desert bighorn sheep (*borrego* in Spanish) which, on rare occasions, can be seen in the higher country to the south. Blue Spring near the canyon's headwaters in the Pinyon Mountains was long a watering place of the bighorns, but according to the last report I had, the spring is now dry. Nolina Wash takes its name from a plant somewhat similar in general appearance to the Whipple yucca.

From road's end in Pinyon Wash hikers may continue upstream, leaving Mescal Bajada and entering isolated Harper's Flat, where the Harper brothers attempted to run cattle early in this century. In 1922 the two brothers, Amby and Julius, and Julius' son Akim, completed a pair of dams along upper Pinyon Canyon above Harper's Flat. A line shack can also be seen near the lower dam. The dams were built to provide water for the cattle, but failed to do so because of silt and unreliable rainfall.

Hiking, to me, is the best way to ex-

plore and enjoy the Mescal Bajada country. Four-wheel-drive is useful in getting me and my gear away from the pavement and within range of points of interest, after which I prefer to leave the vehicle behind and strike out afoot. The bajada has much to offer the hiker.

Vegetation is abundant and varied, and in springtime many annual wildflowers add their color to an already impressive plant community. Mescal, desert lavender, chuparosa, ephedra, cheesebush, smoke tree, ocotillo, and ironwood, together with barrel, hedgehog, cholla, and beavertail cacti, are some of the larger plants. Pinyon pine and juniper grow in the higher elevations. Once on an April day I counted approximately 30 different kinds of plants in bloom near Pinyon Wash.

Indian signs are another rewarding feature for the foot traveler. Mescal pits — depressions in which the Dieguenos roasted the young flower stalks of the mescal (century plant or agave) — can still be seen. Only once during its lifetime does the agave produce a flower stalk; after flowering the plant dies. This stalk, which may eventually reach a height of 15 feet or more, was pried out from its basal rosette of leaves while still

*Grinding holes and pestle fragments at one of Mescal Bajada's Indian sites.*







*View across Mescal Bajada from the foothills of the Pinyon Mountains. Dark notch to left is the Narrows of San Felipe Creek at the bajada's northeast corner. Dominant vegetation in this photo is ocotillo.*

young and small and roasted in a shallow pit usually lined with rocks. In color and flavor the cooked bud resembles a yam. In addition, the leaf fibers of the agave provided the Indians with material for rope, bowstrings, sandals, and other items. With its stands of century plant and its ancient pits, Mescal Bajada is indeed well named!

Aboriginal grinding holes in which wild seeds were ground up for food dimple rock outcrops, and potsherds are frequently seen. Fragments of Diegueno trails, some still bordered by rock markers, can be followed for short distances. Searching these old pathways and pondering their destinations is a fascinating pastime. Often a trail will disappear in a sandy wash, but can be picked up again beyond the break. Some of the Mescal Bajada routes no doubt led to Harper's Flat, the Pinyon Mountains, Earthquake Valley and Yaqui Well.

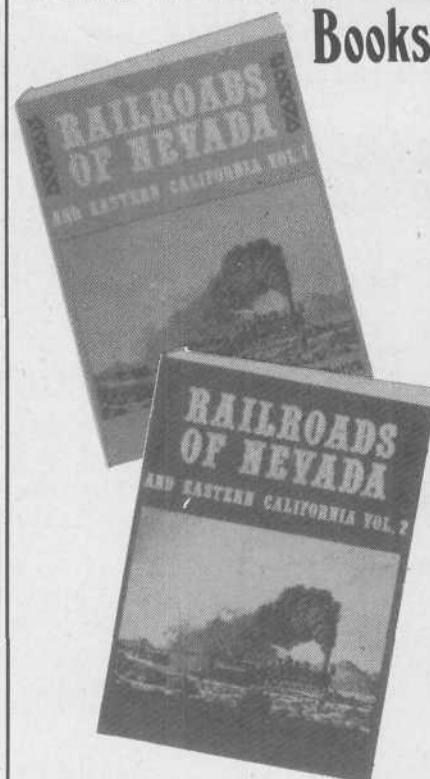
Yaqui Well, northwest of Mescal Bajada and a fraction of a mile up San Felipe Wash from Tamarisk Grove Campground, is still a reliable source of water. It was named for a Yaqui Indian from Mexico who settled there in the late 1800's. Many are the tales of hidden gold which revolve about this famed des-

ert waterhole. The Yaqui was said to have a secret source of gold somewhere in the Badlands, a source he tapped whenever he needed money. And the trail to this treasure, a trail known only to the Indian, started at Yaqui Well.

Another legend of desert gold is that of the prospector and the Indian woman. One evening near the Narrows at the northeast corner of Mescal Bajada, an old burro-man met an Indian woman who had with her the body of her dead husband. She promised that she would reward the prospector with gold if he would help her take the body to the burial ground in the nearby mountains. Traveling in darkness through rugged country, they transported the body to the proper place and buried it. Then the woman disappeared into the night, returning many hours later and guiding the prospector back to the spot where they had met. True to her promise, she handed him several nuggets of gold from her secret store. But, try as he might, the prospector could never find the source of the nuggets, and to this day its location remains a mystery.

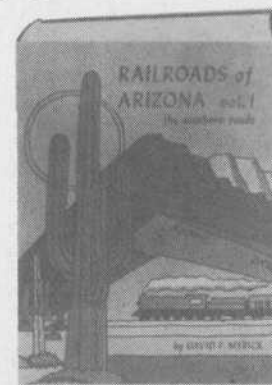
One further incentive, if one needs it, for exploring the washes, canyons and mountain slopes of Mescal Bajada. □

## Great Research Books



**RAILROADS OF NEVADA AND EASTERN CALIFORNIA VOL. I** by David F. Myrick. The poignant record of over 43 railroads of Northern Nevada, many of them never before chronicled. Fantastic reproduction of rare photographs and maps (over 500). A deluxe presentation. Large format, hardcover, \$15.00.

**RAILROADS OF NEVADA AND EASTERN CALIFORNIA VOL. II** by David F. Myrick. Just as Vol. I detailed the history of the Northern Roads, Vol. II expands the railroad history to the Southern Roads of Nevada. This volume also contains a useful index to both volumes, and is a reliable and accurate travel guide today as the reader wanders among the ghost towns of the past. Lavishly illustrated with maps and old photos, large format, hardcover, \$15.00.



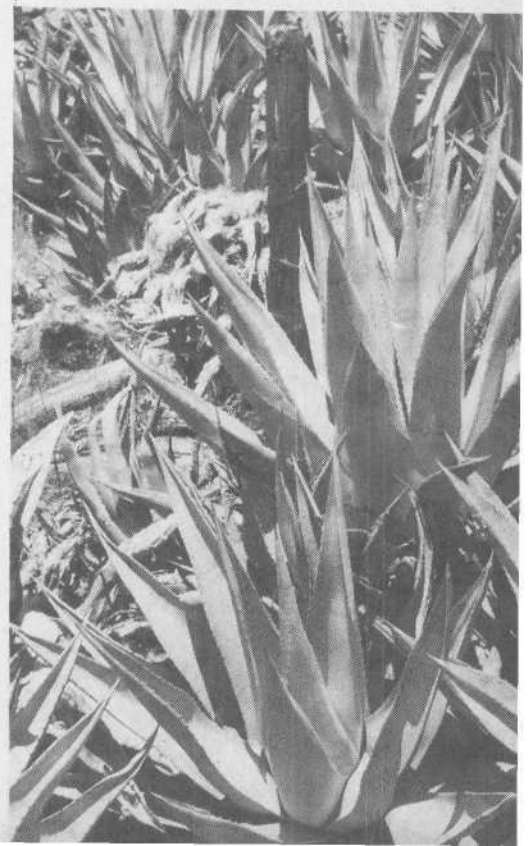
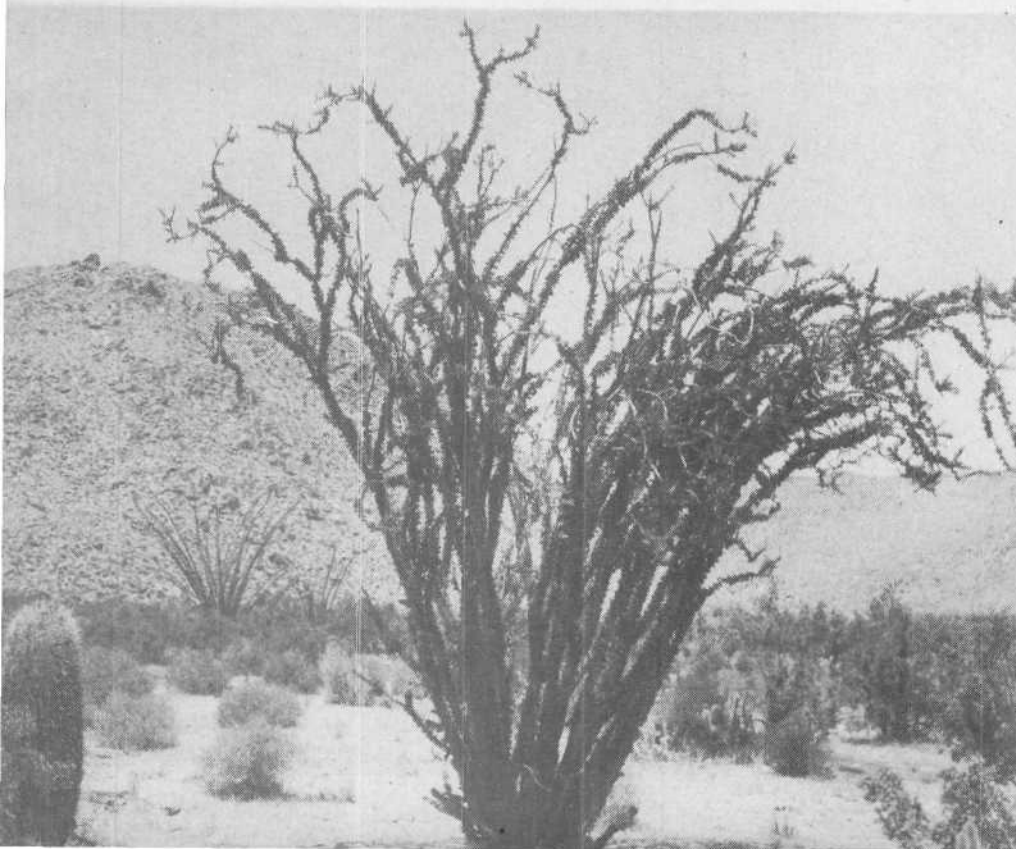
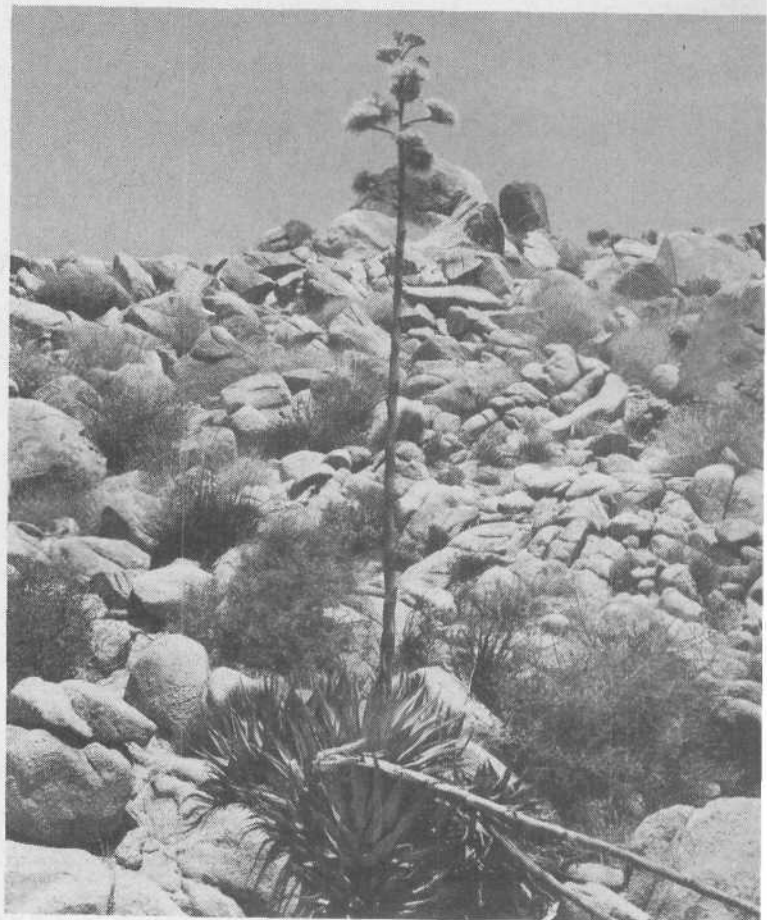
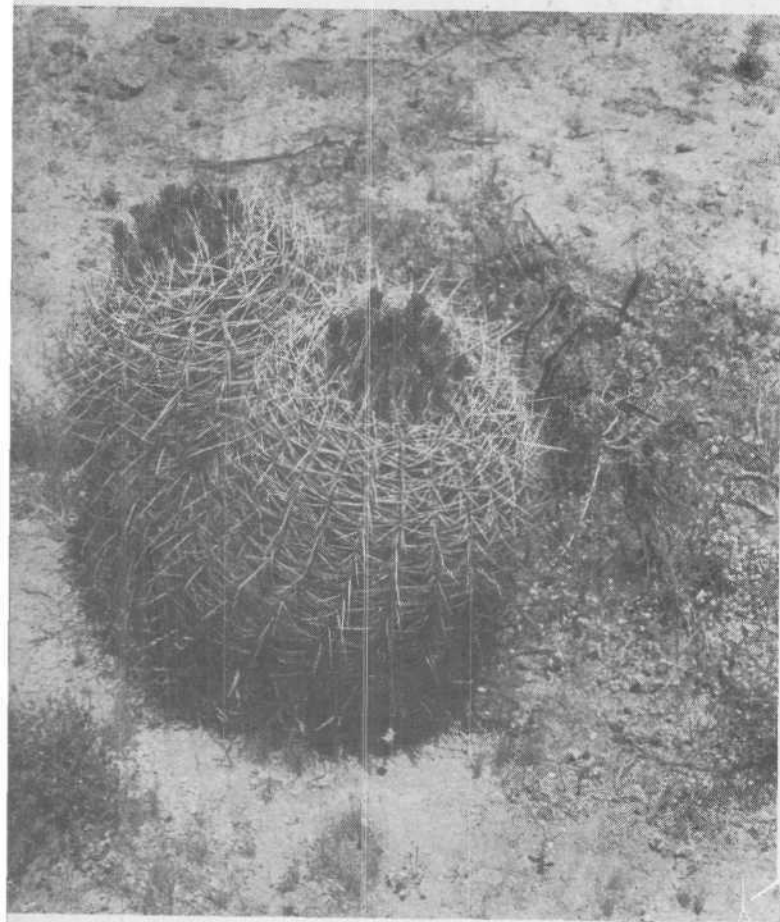
**RAILROADS OF ARIZONA VOL. I** by David F. Myrick. More than 30 railroads of Southern Arizona are presented, together with 542 nostalgic illustrations, 55 special maps and an Index. A valuable travel guide and a reliable historical reference. Large format, hardcover, 477 pages, \$19.50.

Please add 50c for Postage/handling  
Calif. residents add 6% state sales tax

**Desert Magazine Book Shop**

P. O. Box 1318, Palm Desert, Calif. 92260

# ARCHEOLOGICAL STUDIES C





# F DESERT AREAS BY BLM

Clockwise, from left:

No pun, but here is a double barrel cactus. Agave in bloom.

The agave reaches maturity in seven to 12 years and blooms. Then it dies. The flowers form seed pods. Fibers from the agave leaves were used by Indians in making nets and baskets. Young agave plants growing in a constantly enlarging circle as the inner parent plants mature and die. The young agave "heart" was roasted in a pit. The edible portion is described as being similar to a yam. An ocotillo plant in bloom. The branches are clothed with close-growing dark green leaves. The flowers are red and were used as food. The flavor is similar to honeysuckle.



by **TOM EVANS**  
Public Information Officer

**A** SERIES of archeological studies began this summer in Imperial and San Diego Counties by the Bureau of Land Management is expected to provide more knowledge about prehistoric Native American groups of the area and their relationships to former Lake Cahilla (pronounced "Cah-we-ah").

Most of the studies in Imperial County are being done in areas of potential geothermal resource leasing. The exception is a 10-acre site at Ocotillo, where BLM will construct its Yuha Desert Visitor Center. This site is the most intriguing because its artifacts may be more than 10,000 years old.

The study in eastern San Diego County, including McCain Valley, is to gather data for use in preparation of a grazing environmental statement for 98,000-acres sandwiched between Cleveland National Forest and Anza-Borrego State Park. It extends almost to Riverside County line on the north and to the U.S.-Mexico border on the south.

Russ Kaldenberg, District Archeologist for BLM's Riverside District, provided this summary of the work underway:

**East-West Mesa Geothermal Area:** Westec Services, Inc., of San Diego is sampling 15 percent of 100 square miles on both sides of Imperial Valley, including major portions of the Yuha Desert on the west and the Imperial Sand Dunes on the east. Westec also will provide a research design for future studies. Cost of this contract is \$50,000. Completion of the Westec work is scheduled for August 15.

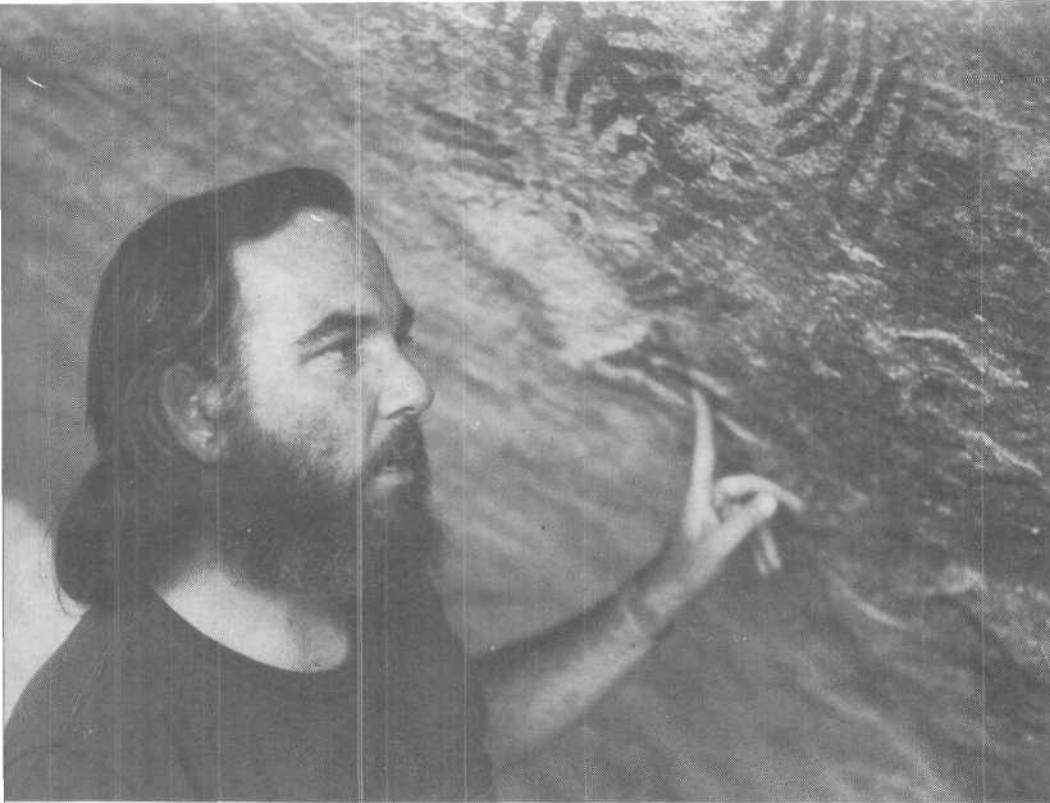
**BLM "In House" Inventory** of three areas: Glamis Geothermal, a 25 percent sampling of 44,000 acres in the Glamis area east of the Imperial Dunes; Dunes Geothermal, a 25 percent sampling of 17,920 acres just east of the Westec study area and south of the Glamis area; San Felipe Geothermal, at least a 50 percent sampling of 8,960 acres, at the southwest corner of Salton Sea, about 20 miles west of Westmoreland. Cost of this three-area study is about \$20,000. Completion is planned for October.

**Yuha Visitor Center Site:** Jay Von Werlhof, interim Curator and Senior Archeologist of the Imperial Valley College Museum, directed a 100 percent surface sampling of the 10-acre site where BLM is scheduled to begin construction of a visitor center at Ocotillo in October. The site is just off Interstate 8. Sampling is now complete but additional work is required, including a search for radio carbon datable material to establish the age of very old artifacts. Cost of this work is \$5,000.

**McCain Valley:** Archeological Systems Management of San Diego has a \$56,000 contract to sample seven percent of the 98,000-acre planning unit. The study is being coordinated by ASM's John Cook. Included is rock art study directed by Ken Hedges, Curator of Archeology and Ethnology at the San Diego Museum of Man. Completion of this study is scheduled for September 30.

## *In-House Inventories*

Kaldenberg said the "in-house" study — by four archeologists hired specifically



*Ken Hedges, Curator of Archeology and Ethnology at the Museum of Man, San Diego, shows well preserved pictographs.*

ly for a four-month job — is the largest of its type undertaken by the Riverside District BLM. Its purpose is to provide comparisons with contract work on cost efficiency, logistics and coverage to determine the location, density and types of archeological sites.

The team of specially employed archeologists is headed by Marvis Kelley, UC, Riverside. Others on the team are: LaVerne Conway, UC, Berkeley; Glenda Foster, San Jose State; and Maureen Steiner, UC, Davis.

Kaldenberg said the work they are doing at a cost of \$20,000 would require an expenditure of more than \$50,000 if

done by a private contractor and the sampling would be 15 percent instead of 25 percent being done by the BLM team.

"This series of inventories in potential geothermal leasing areas may result in the location of important sites — places where we wouldn't want leases to occur," Kaldenberg said. "It appears that there may be no conflict in the Glamis area, because of a paucity of sites, but the San Felipe area has tremendous archeological resources. In San Felipe there may be no surface occupancy, or if there is, geothermal developers would be required to conduct 100 percent inventories of areas they would directly

impact, and they would be required to thoroughly excavate areas where surface disturbances would occur. All of this would be placed in the stipulations and it would be entirely at developer expense."

Kelley, the team leader, said the study area at one time had been under 110 feet of water when Lake Cahuilla occupied most of Coachella and Imperial Valleys as recently as 500 years ago. After the former lake bed was vegetated, Cahuilla people settled in the area, apparently in large numbers because of nearby Harpers Well, one of the few perennial springs in that part of the desert.

The spring and its run-off — San Felipe Wash — meant abundant wildlife such as owls, coyotes, rabbits and frogs. There also was, and is, an abundance of mesquite seed, which was ground into flour. These food sources resulted in development of many village sites.

"I spent 10 hours looking for the boundaries of village sites," Kelly said, "and there were no boundaries."

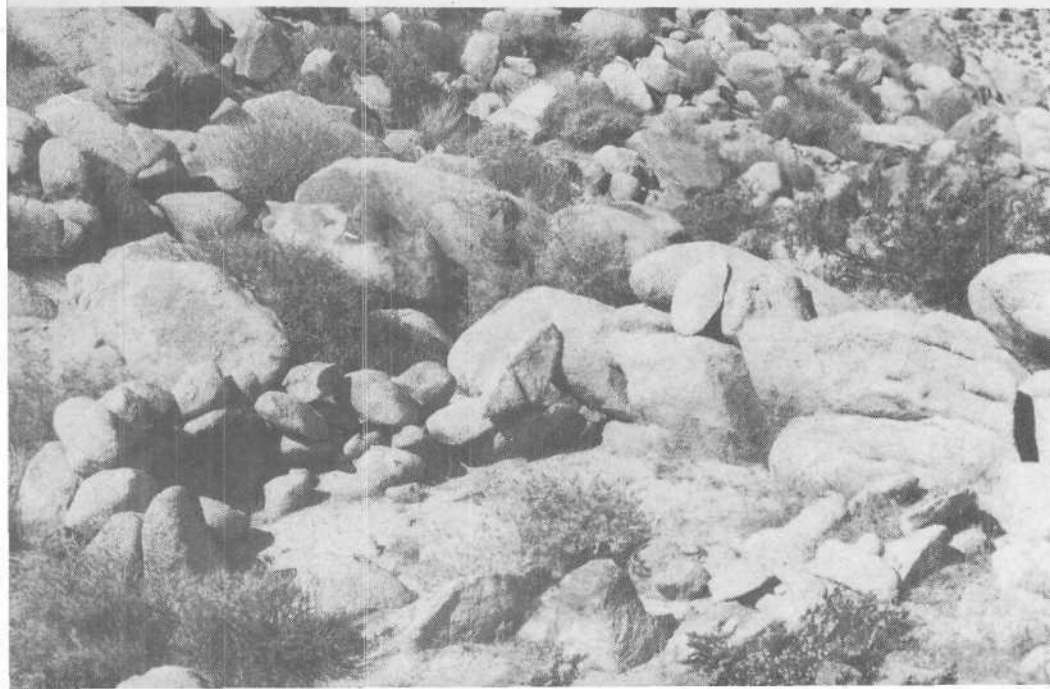
The Cahuilla people who lived in this area did so after the lake dried up about 1500 A.D. although the massive lake has come and gone many times, and some artifacts may be from previous times of occupation.

Little is known for certain about San Felipe, but it is known that DeAnza visited Harpers Well in 1774, and a land plat of 1855 showed an Indian village there. Intrusion of the white man caused the village to disappear.

Gail Egolf, BLM's El Centro Resource Area archeologist, said radioactive carbon dating has established that people lived in the area at least 10,000 years ago — a period that apparently encompassed many fillings and recessions of Lake Cahuilla.

#### *Lake Cahuilla*

Gerrit Fenenga, BLM's Indio Resource Area archeologist and a specialist on Lake Cahuilla, said the most recent stand of lake is believed to have begun



*The low circle of rocks shown here on a hillside in the McCain area may have been part of a hunting blind. Bighorn sheep once were plentiful in the area.*



*Marvis Kelley, head of an archeological team which conducted three inventories in areas of possible geothermal leases. He is holding mesquite beans, which were used by Southern California Indians as a major food source.*

about 900 A.D. and to have lasted until about 1500 A.D. The inundation was caused by shifting channels in the Colorado River delta. At times these channels diverted water into the Salton Sink, which dips to 225 feet below sea level, and created the lake.

In its most recent stand, the lake is believed to have been 115 miles long, 35 miles wide at the widest point and as much as 315 feet deep. It extended from north of Indio to about 25 miles south of the U.S.-Mexico border.

The northern end of the lake filled much of the Coachella Valley and attracted the heaviest habitation — people of the Cahuilla tribe, who built year-round villages. There was abundant food: freshwater fish, clams, migratory waterfowl and marsh plants, as well as upland wildlife and plants. The southern end of the lake filled the Imperial Valley. The lakeshore was occupied by fewer people — the Kamia, who primarily were nomadic hunters and gatherers.

It is estimated that the Cahuilla population ranged from 2,500 to 3,500 at the peak when the lake was full and food was comparatively plentiful. For hundreds of years the Colorado dutifully fed the lake. There was no reason to believe it would change. But it did. A build-up of silt in the delta and a change in the channel about 1500 A.D. resulted in calamitous adjustments for the Cahuilla and Kamia peoples. Fenenga said that once the inflow of the Colorado was cut off, recession of the lake by evaporation apparently was progressive. Evaporation occurred at the rate of about six feet of depth a year. Part of the story is told by a pathetic progression of stone fish traps which descend on 15 shorelines about five feet apart.

At this rate of evaporation, the lake would have dried up in 55 to 60 years and become a barren salt playa, but the

*Fish trap—remnants of rock enclosure constructed by prehistoric Indians on the shore of Lake Cahuilla. The fish entered a small opening and apparently were netted as they tried to escape.*



calamitous events for the Indians were more immediate.

Fresh water mussels could not adapt to the rapid recession and are believed to have disappeared within 10 years. Higher water temperatures and increased salinity brought an end within 25 years to fish populations, marsh plants and wildlife associated with the marshes, including waterfowl.

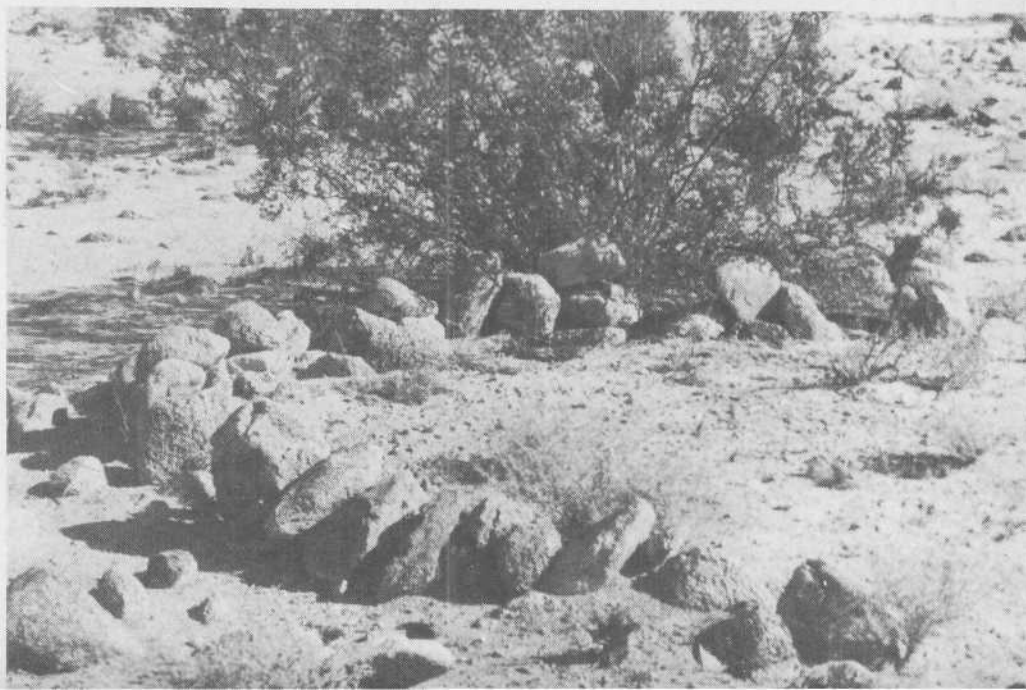
The dilemma for the Cahuilla and Kamia was to find supplemental food sources. They moved into the mountains. It is not known how much time passed before the lake bed was revegetated. The key plants to appear were the mes-

quite and screwbean — both highly nutritious and storable.

It appears that the people were living on the lake bed by 1600. They built villages at springs and walk-in wells they dug. White explorers in the mid 1800's reported irrigated agriculture. The crops included corn, pumpkins and watermelons.

Then the Indian settlements vanished — for good. The white man proved to be a more decisive calamity for Indian life-ways than the Colorado: Lake Cahuilla cannot happen again. Boulder Dam controls the Colorado River flows and prevents it.

*Continued on Page 46*







*Some storage buildings still left in Harqua Hala.*

# HARQUA HALA, ARIZONA

by JAMES R. MITCHELL

**N**OT TOO FAR from Salome, Arizona rests the remains of the once booming town of Harqua Hala. Remnants of the mining operation and a number of the town's old buildings can still be visited. In addition, there are some nice mineral specimens available to the rockhound who is willing to spend some time digging through the dumps and rock piles in the area.

The town began with the discovery of gold in the Harquahala Mountains in 1888 by Harry Watton, Bob Stein, and Mike Sullivan. These three actually discovered two separate deposits nearly a mile apart from each other, later to be called the Bonanza and the Golden Eagle. It is reputed that there was a fourth partner, in addition to Watton, Stein and Sullivan. This fourth partner, whose name has been lost over the years, was reportedly in Yuma obtaining supplies when the discoveries were made. Upon returning to the group, he



learned of the rich gold that was discovered, but was also informed that he was no longer a partner. After a court battle, it was determined that the claims belonged to the three who had actually discovered them, and the fourth partner, even though he was obtaining supplies for the others, was not legally entitled to the mining rights.

As Watton, Stein and Sullivan started work on their claims, another legal problem was unfolding. A woman named Carmillita, who lived in the nearby town of Harrisburg, announced that the new-found claims were actually hers and made reference to a marker nearby with her name attached. It was soon discovered, however, that she had over 300 such unrecorded markers in the area, all seeming to be randomly placed with no evidence of any prospecting. A judge decided that it was a coincidence that something of value was found near one of her markers and her claims were all discounted. In later years, as the mines

and the new town prospered, Carmillita still insisted that she had known of the valuable minerals in that location well before Watton, Stein and Sullivan, and that the gold was rightfully hers.

As the mining advanced in the area, the town started to grow. A story is told that the first saloon in Harqua Hala was established by a man who, while visiting the area, set up a tent, and started selling drinks from his one and only bottle of whisky. This enterprising man sold out in less than an hour and history doesn't have a record of whether or not he later expanded his business, or if it was just a one time thing. In any event, shortly thereafter, there were a number of saloons in this area as more and more thirsty people moved in to work the mines.

In January of 1889, Harqua Hala was shocked by its first murder. The town had suffered many losses at the hands of Indians, but never, up to this time, had one of its citizens been accused of killing

another. On January 7th Alonzo Johnson and two companions arrived in Harqua Hala by wagon. The trip had been long and dry, and when they finally arrived in town, Johnson headed for the nearest saloon and started to drink. He drank through the entire night and eventually started gambling. This drinking and gambling continued throughout the following day and, as he started losing at the gambling table, he became more and more irritable in his drunken state.

He then started antagonizing a local resident named Peter Burns. This antagonism and many attempts to start a fight with Burns continued for many hours. When Burns would try to leave or to avoid Johnson, Johnson would follow, continuing his verbal and sometimes physical abuse. Finally Johnson grabbed a large wrench and charged Burns with it. Burns, feeling that his life could be in jeopardy, quickly pulled out a gun and, before Johnson could make contact with the wrench, shot him in the face. John-

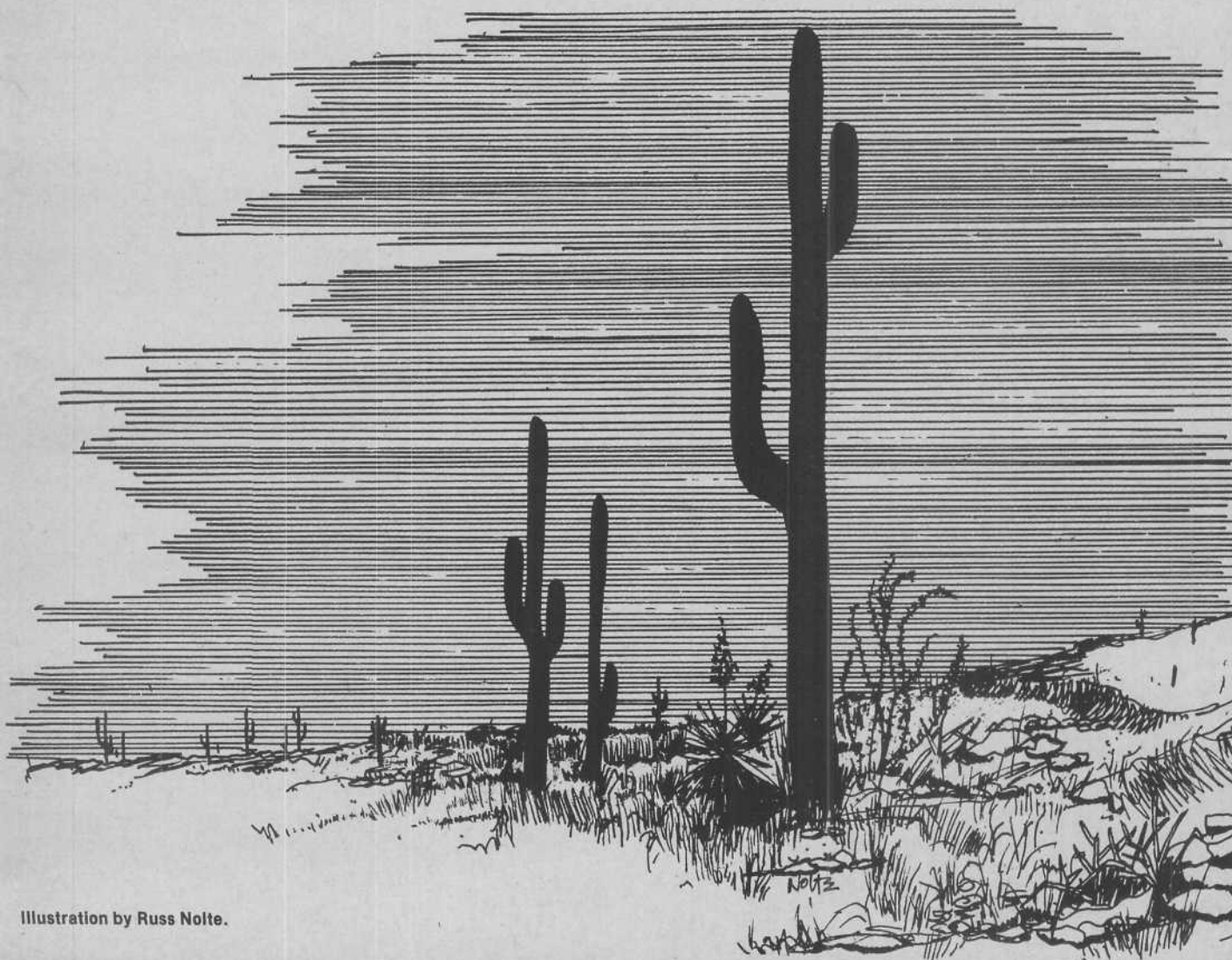


Illustration by Russ Nolte.



*A view of the mine workings taken from the central section of town.*

son died immediately and the town was shocked. Peter Burns, one of the town's most respected citizens, was taken to jail to stand trial in Harrisburg for murder. Eventually he was found innocent of the charges, with the jury ruling it as self-defense.

By 1890, there were disputes concerning many of the mining claims in the area. Claim jumping was common, and legal arguments ensued. Then, in mid-1890, the two largest claims in the vicinity, the Bonanza and the Golden Eagle, were sold to A.G. Hubbard and G.W. Bowers. Hubbard and Bowers proceeded to develop these claims into a large-scale operation and organized the Bonanza Mining Company. Eventually, most of the holders of the smaller, and far less productive claims found it more profitable to work for Hubbard and Bowers than to work their own diggings.

In 1891, the Bonanza Mining Company had set up a 20-stamp amalgamation mill, and by 1893 the company had extracted \$1,600,000 in bullion, making it a very profitable operation. By late 1893, however, the mines were playing out and Hubbard and Bowers sold out to a British group for \$1,250,000. This group called themselves the Harqua Hala Gold Mining Company, Ltd., and, by 1895, they had completely remodeled

the mining operation and had built a 150-ton cyanide plant to extract the gold from the tailings of both the Bonanza and the Golden Eagle.

In the meantime, the town itself was booming. There was a post office, many stores, a stage running daily between Harqua Hala and Sentinel, a number of boarding houses, numerous saloons, and all of the other necessary businesses needed for a full-fledged town. A local newspaper, *The Harqua Hala Miner*, was started by Captain John McCasey in the early 1890s and a pipeline over six miles long was constructed to furnish this desert town with water.

One interesting note about Harqua Hala deals with the method it used to ship the valuable gold ingots. The gold had to be transported many miles by wagon to Phoenix and, in the vast stretches of desert that the wagon had to traverse, it was easy prey for robbers. After being held up a number of times, the mine engineers devised a way to pour the gold into ingots weighing as much as 400 pounds. By doing this, if the ore wagon was held up, the robbers could not lift the heavy gold, and would be unable to get away with it. This method seemed to work very well.

In 1897 the ore body and the tailings were nearly depleted of their precious

gold. By 1899, the British group was in financial trouble and put the operation up for sale at a public auction. Ironically, the person who purchased the company was A.G. Hubbard, one of the men who had sold the mine to the group originally. Hubbard, however, paid less than \$5,000 to regain ownership of the mines, a far cry from the \$1,250,000 he had received for them only a few years previously. The British company had taken out \$750,000 in bullion while they were in operation.

During the following years, the mines were nearly idle, except for some small lessees doing some work. The town gradually folded up and most of the inhabitants moved to more prosperous areas.

In 1906, the Harqua Hala Mining Company was organized, but in the seven years of their operation, they made virtually no profit. From 1913 until 1916 the Yuma Warrior Mining Company produced a small profit from the mines and tailings, but not enough to continue. The post office closed in August of 1918.

W.L. Hart and some associates reopened the mine in 1926 and there was a slight rebirth of activity in the ensuing years. The post office was re-established in 1927 under the name of Harqua, but Hart's company was unable to produce a worthwhile profit and, in 1934, they stopped operations. The post office had closed two years earlier, and, by this time, there was virtually no one left in the town. A few die-hards remained for many years, but today nobody is living in what remains of Harqua Hala.

The total production of the Bonanza and the Golden Eagle was about \$2,500,000. The Bonanza deposit was in a fault zone which cut through limestone, shale and quartzite into a base of granite. The ore occurred in two major zones and ranged from a width of just a few inches to many feet. There was some silver found in the ore, but very little. On the dumps, the rockhound can find specimens of red hematite, quartz, chrysocolla, calcite and some gypsum.

The Golden Eagle vein cut through quartzite and the ore shoots were sometimes up to 15 feet wide. The rockhound can find pyrite, chalcopryrite and some galena on these dumps.

A very interesting sidelight dealing with Harqua Hala is the often mentioned



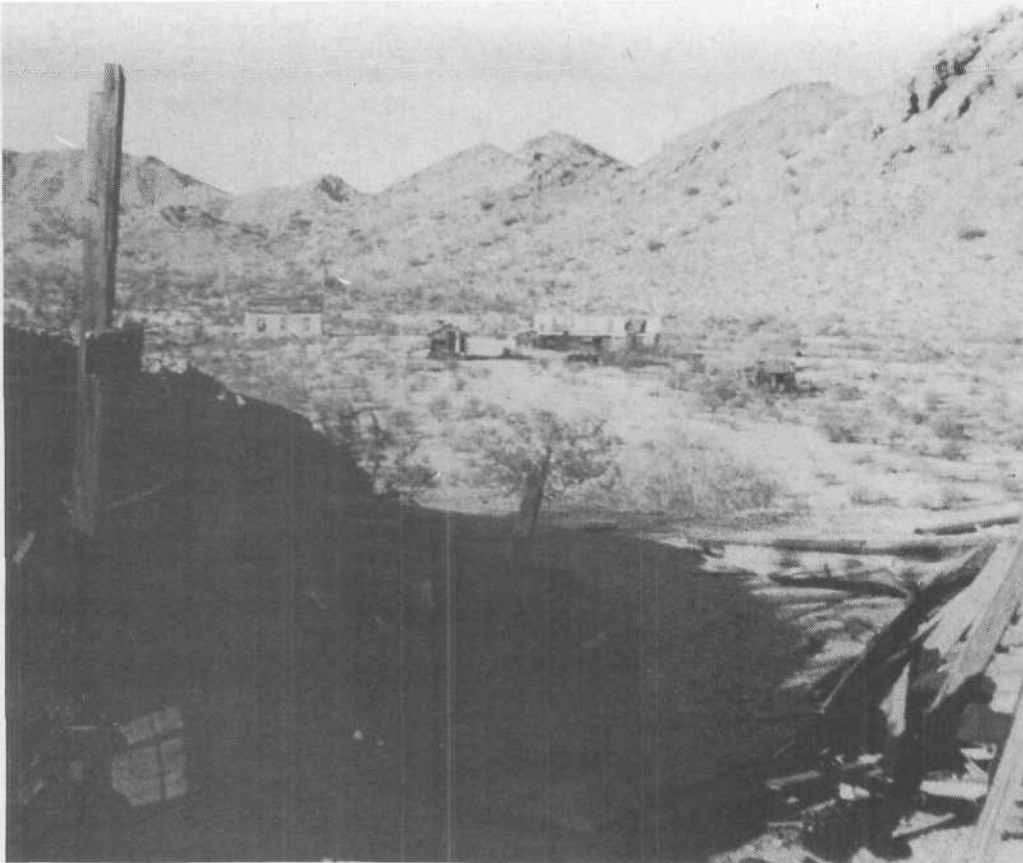
possibility that one of its mines could be the famous Lost Belle McKeever gold deposit. This legendary deposit is reputed to be in the general area of the Harquahala Mountains, and some of the ore taken from this region is very similar to that from the Lost McKeever.

As the story goes, in 1869, nearly 20 years before Watton, Stein and Sullivan made their discoveries, a rancher named Abner McKeever and some of his family were working in their fields quite a distance from the safety of their home, near the present day site of Gila Bend. They were attacked by a renegade band of Apache Indians and the warriors kidnapped McKeever's daughter, Belle. McKeever frantically sent word to Fort Yuma, and troops were sent out in pursuit of the Apaches and their hostage. The troops eventually came across the Indians and they immediately split up and headed in different directions.

The soldiers, not knowing which of the parties had the captured girl, also split up. One of these groups was comprised of three men: Sergeant Crossthwaite, Private Wormley and Private Flannigan. These three followed their assigned band of Indians for many miles across the hot summer desert. Eventually the Indians were able to escape the followers and the three soldiers found themselves lost in some very inhospitable and unfamiliar territory.

While traveling in the direction they hoped would lead them to the Gila River, two of the horses died of exhaustion and the men were near death. Luckily, they came upon a spring in the foothills of a desert mountain and spent that night near it. Early the next morning, somewhat refreshed, they returned to the spring for more water and discovered gold nuggets glistening in it. After investigating the area, they found a large outcropping of quartz containing an abundance of gold. The soldiers chipped out nearly 50 pounds of the ore and placed it on their one remaining horse.

They then proceeded to once again head toward the Gila River. They misjudged the severity of the intense desert heat, however, and after only a day of travel, the horse died with the precious cargo on its back. The three men, also feeling the effects of the desert's shadeless heat, continued toward their destination. Shortly thereafter, Sergeant Crossthwaite collapsed and was unable



*A view of some of the remaining buildings that still can be found in Harqua Hala.*

to continue. Wormley and Flannigan continued on, but, in due time, Flannigan also found himself unable to go further. Wormley eventually made it to the Gila and related his story to the other troops.

Without hesitation, the soldiers headed out searching for Flannigan and Crossthwaite. They found Flannigan alive and were able to save his life, but it was too late for Crossthwaite. He died shortly after he was found. The horse with the gold was located, and nearly \$1,800 worth of ore was in its saddlebags.

For many years after this incident, Flannigan and Wormley searched for the elusive spring and the gold, but were unable to relocate the spot where they had found it. Since then, many other prospectors and treasure hunters have explored the area using the information obtained from the two soldiers. None, as yet, have had any success.

The locations where most of the searching has taken place have been in the Granite Wash Mountains which are near the Harquahalas. This does not necessarily mean that the gold is actually in the Granite Wash Mountains, however. In fact, with all of the searching that has taken place in those mountains, many feel that the gold isn't in that location at all. Keep in mind that the sol-

diers were delirious, and could have strayed well off the course that they assumed they were on. The mountains where they actually found the gold could have been in an altogether different location than they remembered. The Granite Wash Mountains are slightly north of the present day town of Salome, while the Harquahalas are slightly south of Salome. It is possible that the two mountain ranges could have been confused by the incoherent soldiers as they struggled through the intense heat of the desert.

There are many who feel that either the Golden Eagle or the Bonanza is the Lost McKeever. Whether it is or whether it isn't, it still is an interesting thought. By the way, Belle McKeever — remember her? — she was never found!

To get to the ruins of Harqua Hala, take Highway 60 to Salome, and then head south on the Harqua Hala Mine Road for about 12 miles. The dumps can be seen on the hills, and the remains of the town can be reached by driving to the base of the mountain. The road is not a bad dirt road, but it is rough in some places. If you do decide to visit this interesting townsite, be sure to drive carefully, keeping in mind that it is a desert area and can get very hot during the summer months. □

# A CARNIVOROUS PLANT

by WAYNE P.  
ARMSTRONG

Here is an author who went to great lengths to illustrate this article, wading waist-deep into a cold, slimy pond. Then, using a Bausch and Lomb dissecting microscope with a built-in camera adapter, produced these incredible photos!

*Underwater view of slender branchlets bearing tiny bladder traps. Note the bristly hairs at the entrance to the bladders.*

**O**F ALL THE PLACES to find an insect-eating plant in southern California, the Mojave Desert seems about as unlikely as any. This is especially true since most carnivorous plants in North America grow in marshy or boggy habitats with abundant water. Surprisingly enough, there is a marsh area about one mile east of Victorville that contains an amazing insectivorous plant called the bladderwort [*Utricularia vulgaris*]. This remarkable area is part of the Mojave Narrows Regional Park, one of San Bernardino County's most beautiful and spacious parks. The park includes a lush growth of willows and cottonwoods, grassy meadows, acres of peaceful waterways, pedal boats, and excellent picnic and camping facilities. At the north end is a pristine freshwater marsh and valuable wildlife refuge, including the unusual bladderworts.

This magnificent water wonderland originates from the underground Mojave River which drains from the San Bernar-

dino Mountains and surfaces southeast of Victorville. The bladderworts grow in a slough area surrounded by dense cattails, bulrushes, and willows. This is truly a haven for numerous kinds of birds, colorful dragonflies, and a symphony of frogs and crickets on a warm summer evening.

The bladderwort is the only true native insectivorous plant in southern California — except perhaps for pitcher plants, sundews, and Venus flytraps grown in terrariums. There are actually several different species native to California, generally in streams, lakes, and meadow areas of central and northern California. They also occur across the United States and in tropical regions of North America. The species of bladderwort growing at Victorville has a very large distribution, including Alaska, the Atlantic Coast, and Eurasia. It is interesting that this plant has never been reported from other lakes and ponds of southern California. In fact, if anyone finds it I would greatly appre-

ciate knowing its precise location.

The bladderwort flower is similar in size and shape to a snapdragon except it has a conspicuous, slender, lower spur. Several flowers are borne on erect, leafless stalks that emerge from the water during the late summer. Sometimes the dense masses of flower stalks and bright yellow flowers resemble a yellow carpet across the pond. Just below the water surface the base of the flower stalk or aerial shoot arises from several main branches, each with numerous, feathery, finely-divided branchlets. Some authorities consider these masses of feathery branchlets to be the actual leaves.

In some ponds the feathery branchlets or leaves form a continuous mass of green filaments from bank to bank, and provide the habitats for an incredible array of aquatic insects — from water beetles to immature dragonflies. The insects in turn provide the food for small fish and amphibians, and so begins the intricate food web of a freshwater pond.

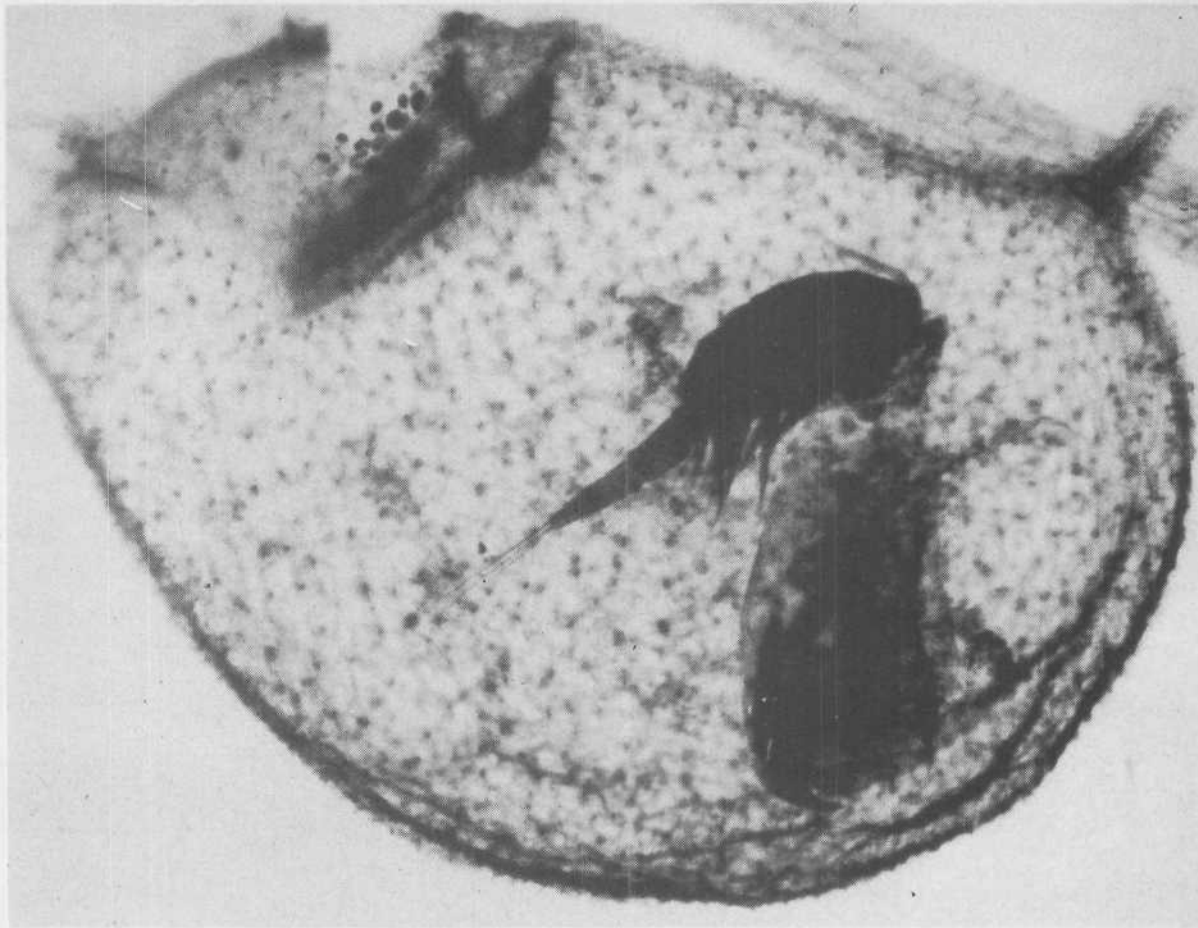


# IN THE MOJAVE DESERT

Magnified view of single bladder containing a trapped copepod, a minute crustacean related to shrimp and crayfish.

The tail, legs and antennae of the copepod are clearly visible.

The entire bladder is only about the size of an ordinary pinhead!



There are no true roots and the entire plant is suspended in water, absorbing nutrients directly from the pond.

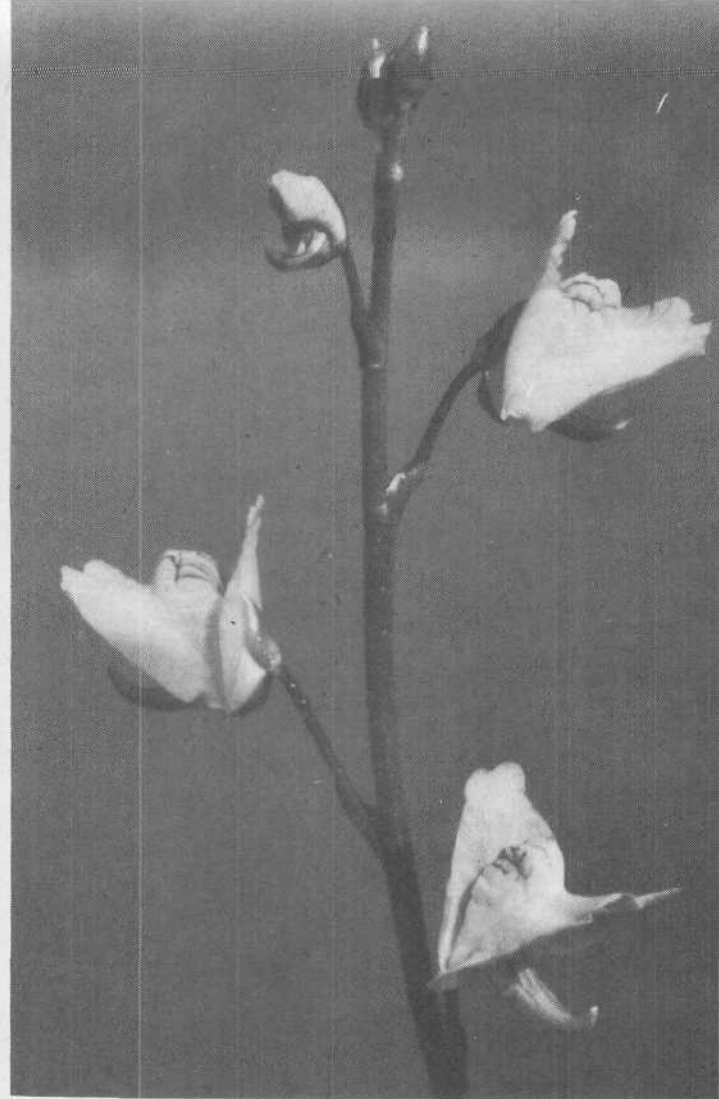
Probably the most fascinating thing about bladderworts are the thousands of minute bladders attached to the feathery leaves. The flattened, urn-shaped bladders range in diameter from two millimeters (the size of a pinhead) to about four millimeters (the size of a BB). The common name bladderwort is derived from their unique bladders and an old English word for plant (wort). The generic name *Utricularia* is derived from the Latin, *utriculus*, a little bladder; while the specific epithet, *vulgaris*, refers to its common occurrence. To me it is a pleasure learning logical common and scientific plant names like these, compared to irrational names like "bouncing bet" and "bastard toadflax"!

To really appreciate this remarkable plant you must know a little about the marvelous bladder or insect trap. It is probably one of the most delicate organs

in structure and function in the botanical world. Each minute oval or egg-shaped bladder is attached to the feathery leaves by a tiny stalk. At one end is an opening and a flap of tissue which forms the door. The door hangs down from the top of the entrance like a garage door, except it opens inwardly. Support tissue surrounding the opening functions like a doorstep and doorsill or threshold on a door frame and helps to seal the door, preventing water from entering the bladder. A mucilage coating around the entrance also helps to make it waterproof. The opening is surrounded by several bristly hairs that look something like the antennae of a tiny crustacean or insect. In fact, it has been suggested that certain minute crustaceans, such as water fleas, may be deceived or perhaps seduced by the bladder's extraordinary resemblance to one of their own kind. Nectar-producing glands on the outer surface of the door also apparently act as a lure.

Numerous, tiny, four-pointed glands (called quadrifid glands) inside the bladder absorb most of the internal water and expel it on the outside. As a result a partial vacuum is produced inside the bladder and the pressure on the outside becomes greater than inside. This causes the walls to squeeze inward and explains their slightly concave appearance.

The airtight door is hinged to allow easy entry; but like a door, cannot be forced open from within. Special trigger hairs near the base of the door cause it to open. There are several explanations for the exact mechanism by which the door opens. When a minute aquatic insect or crustacean touches or hits one of these extremely sensitive hairs, the hair acts as a lever, multiplying the force of impact and bending or distorting the very pliable and delicate door. This breaks the watertight seal and, since the bladder contains a partial vacuum, the hapless victim is literally sucked in. There also



may be an electrochemical impulse or stimulus that relaxes the doorsill tissue thus freeing the door to suddenly flip inward. Anyway, the whole trapping process has been estimated to occur in less than 1/100 of a second.

Over a period of 15 to 45 minutes the trap is reset by expelling water and recreating the partial vacuum within. If you lift a mass of bladderwort branches out of the water it sounds like a bowl of Rice Krispies and milk! Apparently stress on the hundreds of tiny, flimsy bladders causes them to spring open and air bubbles pop into them.

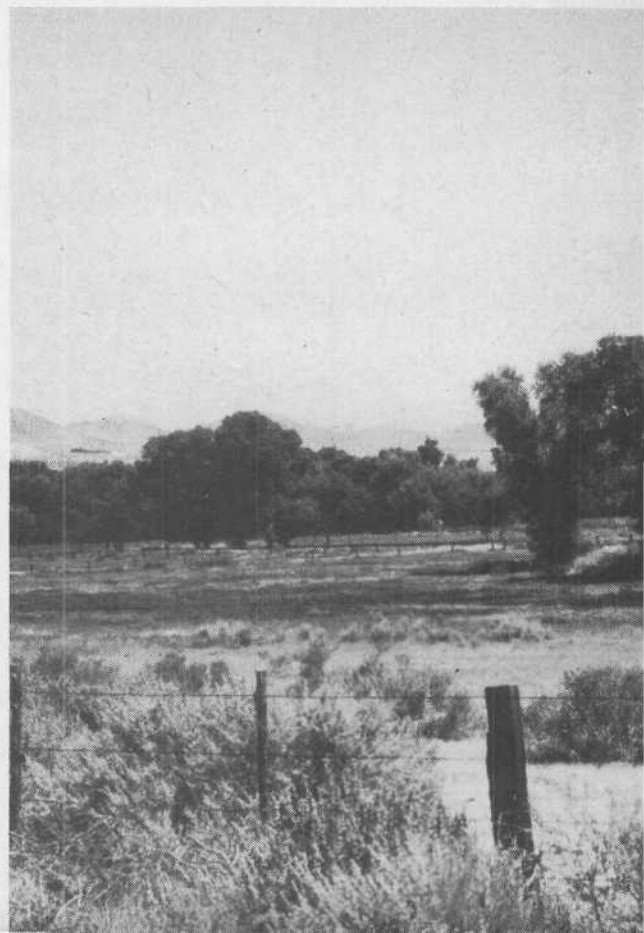
Once inside the bladder there is no escape, and the tiny organism is eventually broken down through bacterial action. Bladder extracts from some species indicate that enzymes may also be involved. Essential elements, such as nitrogen, are absorbed through the walls of the bladder and thus the bladderwort is truly a carnivore. Old bladders often become dark colored and may contain the decayed remains of many aquatic

*Bladderwort flower stalk [above left] emerging from pond in late summer.*

*Note mass of branchlets just beneath water surface.*

*Close-up view [above right] of several bladderwort flowers.*

*The bright yellow flower resembles a snapdragon except it has a prominent lower spur. Verdant pasture land [right] of Kemper-Cambell Ranch along northern boundary of Mojave Narrows Regional Park.*





organisms. The bladders are capable of capturing a variety of small organisms including insect larvae, tiny worms, small tadpoles, newly hatched fish, and microcrustaceans, such as water fleas (*Daphnia*) and copepods. Longer larvae and worms may be gradually sucked in and digested piece by piece, analogous to a snake ingesting a large prey. The ravenous appetite of some bladderworts for mosquito larvae make them a potentially useful method of biological control. A tropical bladderwort that lives in pools of water within vasselike bromeliads high in the rain forest has been known to capture tiny tree frogs. This incredible bladderwort sends out aerial runners to find and colonize other bromeliads. A giant bladderwort would make an excellent science fiction movie!

Photographing the bladderwort flowers and bladders can be a real challenge and a test of your patience and endurance. You may have to wade out into a pond up to your waist to get close to a good photogenic flower stalk in full bloom. Just make sure you don't slip or slide into a deep place and submerge your camera! Unlike Okefenokee Swamp in southern Georgia you don't have to worry too much about alligators, water

moccasins, or quicksand at Mojave Narrows. Ideally, to photograph the bladder traps you need a microscope with a camera adapter and a bright illuminating beam that doesn't produce too much heat. When viewing through a microscope, tiny air bubbles will create water movements that make the bladders look like they are in a typhoon.

Nitrogen is an essential element for all plants and it is abundant in the atmosphere and in the decaying organic matter of ponds and bogs where insectivorous plants commonly grow. However, the primary usable form of nitrogen for plants are nitrates, produced from the decay of organic matter by the action of certain bacteria. Bogs containing insectivorous plants are commonly too acidic for the nitrate-forming bacteria. Herein lies the adaptive advantage of capturing insects as a supplemental source of usable nitrogen. There are also other reasons for diminished nitrogen in areas where insectivorous plants thrive.

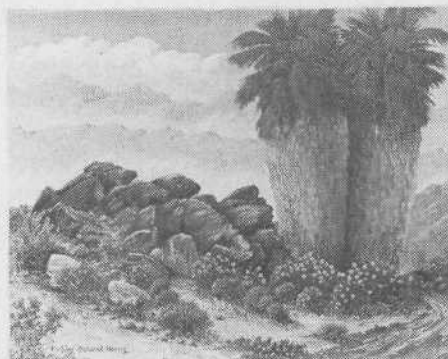
The incredible role reversal whereby a plant actually eats an animal is fascinating. From an evolutionary viewpoint the plant had to develop a successful trap, and manufacture a method to digest the captured animals. From an engineering standpoint the bladderwort trap is an absolute masterpiece of ingenuity and design. How it evolved through millions of years of natural selections is mind-staggering.

Carnivorous plants are certainly not a common find in our southwest deserts. In fact, if it weren't for the Mojave River you wouldn't find the bladderwort growing in Victorville. Since the plant is completely submerged it is scarcely visible most of the year, until late summer when it blooms. Of all the insectivorous plants

the bladderwort has one of the most precise and delicate traps, and certainly the most rapid. There may be other unreported locations for wild bladderworts in southern California, but at present the Mojave Narrows region appears to be the only documented location. I am probably prejudiced, but I think it is one of nature's most interesting and beautiful wildflowers — even though its common name sound more like a urinary disorder!

Even if you aren't interested in bladderworts, the Mojave Narrows Regional Park is a great place for a relaxing and enjoyable picnic or camping trip. □

"The original of this painting not for sale. Now in the collection of Dr. & Mrs. R. S. Baddour, Palm Springs, California."



Twin Palms in Andreas Canyon  
**Original Desert Oil**  
Paintings By **Kingsley Osmund Harris**  
On Sale at **Desert Magazine's**  
WESTERN ART GALLERY See them at  
74-425 HIGHWAY 111  
PALM DESERT, CALIF.

**MOVING?**  
**SO YOU WILL NOT MISS AN ISSUE**  
**NOTIFY US AS SOON AS POSSIBLE**  
Be sure to include old address  
as well as the new  
**AND BOTH ZIP CODES!**



## GORDON'S

### Gem & Mineral

5555 Atlantic Ave., Long Beach, Calif. 90805  
Phone (213) 428-6496

Open Monday thru Friday, 9 to 5:30—Saturday 9 to 5

GEORGE TOPHAM of Tucson, Arizona will demonstrate  
**ELECTROFORMING & JEWELRY ELECTROPLATING** at  
GORDON'S Sat., Sept. 29th from 9:00 am to 5:30 pm.

*Write for FREE ALL NEW GEM SHOPPER*



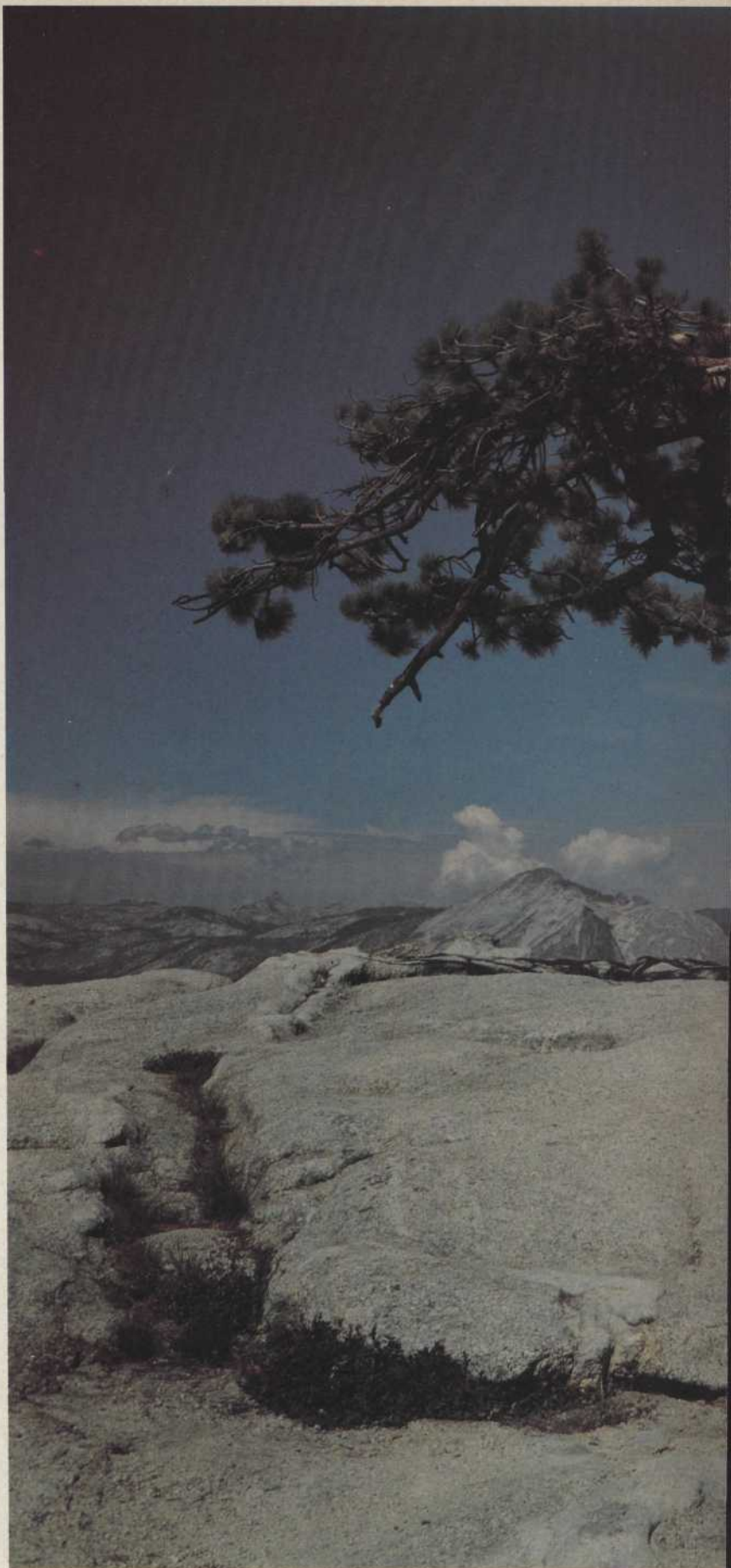
# Full Circle

by R. G. STARLING, JR.

Among the boundless scenic landscapes of our great Southwestern United States, there are a few places that have achieved the distinction of photographic landmarks. This distinction is bestowed by a group of judges, photographers and nature lovers really, that have taken so many pictures of that particular scene or object, and passed the word along, that by the sheer weight of numbers, it has become a photographic landmark. One such landmark is atop a sparse, dry, granite knob in Yosemite National Park, California. Sentinel Dome, as the knob is called, was created in the sometime millennia during the period that laid down sediment, was upthrust, encroached by volcanic intrusion, and finally eroded to its present form along with the gorge that is now Yosemite. The top of the dome is rather barren except for a stepped shelf and some large boulders that are unceremoniously grouped near the center of its comparatively flat summit.

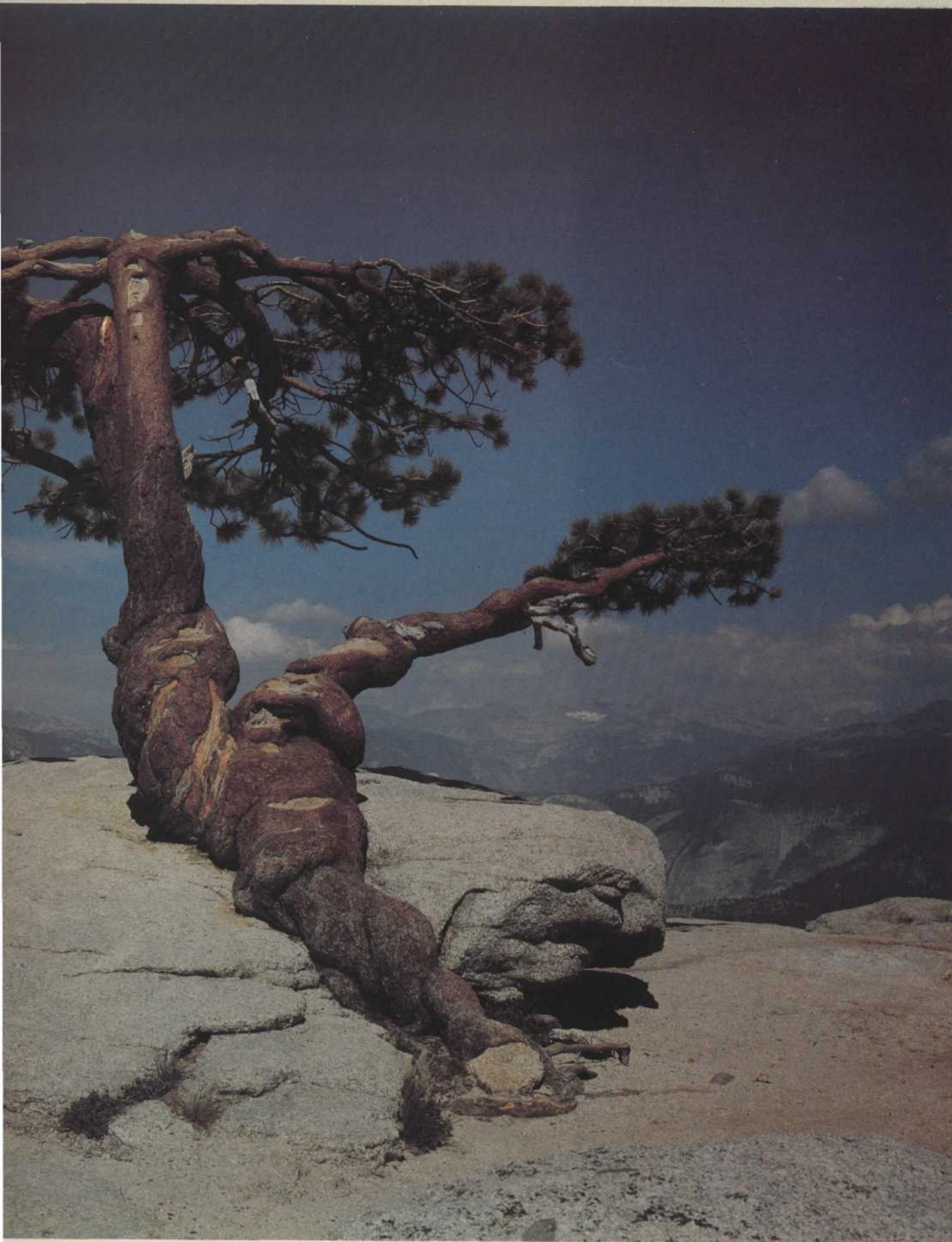
Sometime during the last 100 years or so, a seed from the cone of a Jeffrey Pine lodged in a crevice on the windward edge of the shelf. It germinated from moisture that was trapped in the crevice, took root, and started to grow, and while it grew it was subject to all of the brutal whims and ravages of Nature. Battered by driving rain, frozen by the snows impacted by the winds of harsh winters,

*Continued on Page 37*



*Twisted Jeffrey Pine atop Sentinel Dome.*








# CALIFORNIA'S KANGAROO RATS

by JACK DELANEY

 NATURAL REACTION to the word "rodent" is one of dislike, or even fear. However, those who limit this animal classification to the common rat or mouse should be interested in the fact, that, of the several orders of mammals in the world, *Rodentia* is the largest. It includes such charming creatures as chipmunks, squirrels, porcupines, beavers, hamsters, guinea pigs, chinchillas, and many other small mammals. Even rabbits and hares were considered to be rodents until a recent change in their classification.

Each of these animals serves a useful purpose in the scheme of things. As the famous naturalist and conservationist, John Muir, stated many years ago, "When we try to pick up anything by itself we find it attached to everything in the universe." With this thought in mind, it is important that we allow Nature to regulate the balance between all living things without interference from man. Such factors as loss or alteration of habitat associated with urbanization, agriculture, flood control, and water development, contribute heavily to the demise of many life forms. Even extension



of freeway systems and the introduction of new recreation areas take their toll.

An excellent example of an endangered animal is the fascinating little creature known as the *Morro Bay kangaroo rat*. Its distant cousins, the *Fresno kangaroo rat* and *Stephen's kangaroo rat* are considered to be rare at the present time. According to the California Fish and Game Commission classifications, *endangered* means that the continued existence of the species is in doubt because of a number of conditions that have resulted in a mortality rate consistently higher than the birth rate. *Rare* means that the present population of the subject is so limited that a further reduction would cause it to become endangered.

Kangaroo rats are interesting animals.

---

*The Fresno kangaroo rat, left, as photographed by Walt Hoffman of the California Department of Fish and Game. Morro Bay kangaroo rat, below, was taken by Dr. Glenn R. Stewart, Professor of Zoology at California State Polytechnic University at Pomona.*

They seldom utter any vocal sounds; but they do have a method of communication by thumping the ground with their hind feet. If you would like to carry on a conversation with one of these creatures, just approach its burrow very quietly and slap the entrance lightly with your open hand. If anyone is home in the burrow, you'll hear an answering thump. Should you not hear a thump, try another entrance. Their burrows consist of many tunnels, entrances, and escape hatches. They are designed to serve as safe havens from a number of natural enemies.

When captured by man, these charming rodents make gentle pets. In their natural state, however, they are extremely unsociable with their brother rats. When, by coincidence, they are brought together in Nature, vicious fights usually occur. These are quite often fights to the death! The weapons used are the long hind claws with which they rake and tear their opponents. Even the female has an unsociable streak. When she is rearing young, she tells her mate to "get lost!" He always complies — not because he wants to make points with his bride, but because he wants to

avoid the points on her long hind claws!

These animals live on a diet consisting of air-dried seeds; and an interesting fact is that their need for water is practically non-existent. They fare very well without it for months. The explanation for this phenomenon is that a complex chemical process within their bodies creates water from their dry-seed diet during the course of digestion. Also, they suffer no water loss "under the arms" because they do not perspire. During the hot summer months, they block out the dry heat and increase the humidity level in their burrows by sealing off the entrances and exits with earth.

The *Morro Bay kangaroo rat*, classified as an endangered species, has small front feet and large hind ones, which enable it to jump kangaroo fashion. It is the darkest colored of all kangaroo rats, with a white hip stripe that distinguishes it from other sub-species. In 1957 its stamping grounds consisted of 4.8 square miles of sandy soil on the south side of Morro Bay. This habitat has been reduced to 1.7 square miles, due to the continued growth of the Los Osos and Baywood communities. Even predation



by house cats is contributing to the struggle for survival of this attractive creature.

The *Fresno kangaroo rat*, also dark colored, is the smallest of the kangaroo rats. It was first discovered in 1891 in Fresno. After having been considered to be extinct for many years, it was rediscovered in 1934 near Kerman (San Joaquin Valley). At present, its only known location is near Raisin City in the same general area. Because of its small population, its classification is *rare*. Irrigated agriculture and urbanization have

subdivisions, and recreation developments. However, small numbers continue to exist in areas of abandoned agricultural land not yet touched by the march of progress. Steven's kangaroo rat is considered to be rare, but its situation is being carefully watched for indications of further encroachment on its limited living area.

A number of other sub-species are getting along nicely on their own. Among the non-endangered and non-rare specimens are: the medium-sized *Nimble kangaroo rat* which can be seen

their efforts in behalf of threatened and rare wildlife. This government office has determined that, at present, there is a total of 49 species of fish, amphibians, reptiles, birds, and mammals facing the possibility of extinction from a variety of causes in this state. The breakdown is 25 endangered and 24 rare species of animals. Authorization for the program was provided by the Ecological Reserve Act (1968) and partial financing by the Environmental Protection Program Act (1970), through the sale of personalized license plates for California cars.



*Stephen's kangaroo rat which was captured on film by James Thomas of the California Department of Fish and Game.*

destroyed most of its historical habitat. It is likely that this animal will be declared endangered in the near future; and increased action will be taken to ensure its continued existence.

The *Stephen's kangaroo rat* is a lighter colored small specimen found in San Jacinto Valley (Riverside County), with small populations present in northwestern San Diego County. It can be found in only 16 isolated localities of southern California. Most of its original habitat has been destroyed by land use change from rural to industrial projects, housing

along the southern California coast; the small *Mirriam kangaroo rat*, a resident of the southeastern third of the state; and the large *Desert kangaroo rat* which is present in adequate numbers in the Mojave and Colorado deserts to southern California. There are other sub-species enjoying life in Arizona, New Mexico, and California; but those mentioned here are the best known of these rodents who have chosen this state as their favorite home grounds.

Credit should be given to the California Department of Fish and Game for

It is interesting that when a motorist purchases a license plate with a vital message, such as "SAME-2-U" or "U-2-BUD," he is actually helping some unfortunate animal to continue its existence on this earth. The importance of saving our wildlife was expressed early this century by the famous scientist, explorer, and author, William Beebe. His thought-provoking statement was: "When the last individual of a race of living things breathes no more, another Heaven and another Earth must pass before such a one can be again!" □



## Full Circle

Continued from Page 32

and parched by drought from the searing summer sun, the Jeffrey Pine weathered them all and continued to grow.

It clung tenaciously to the rock shelf that spawned it as it was twisted and gnarled by the constant winds that howl over the rim of Yosemite Canyon. Years passed and the lone tree continued to eke an existence out of the sparse surroundings and eventually achieve a stature of some merit. But Nature, in its devious way, had other plans. It didn't include the Jeffrey Pine in its Master Design and set about putting in motion a series of events that were to tax the little pine's endurance drastically. Nature can be cruel in its way, but I guess that is the scheme of things.

The rains came at fewer intervals and when they did come, they were of lesser quantity. During the so-called rainy season, months would go by with no moisture at all except the little amount of dew that would settle in the early morning hours before the sun broke over the horizon. The winters appeared to be of shorter duration with hardly any snow falling around the little pine. What little did fall was blown away by the constant winds, depriving the tree of its supply of moisture to survive. The summer sun beat down hotter, longer, drying out what moisture had accumulated in the crevice at the base of the tree.

The little pine, defying the Master Design, continued to survive, but the five to seven years of lower than average moisture had severely weakened it. Then in 1977, Nature delivered its coup de grace in the form of the worst recorded dry period in 80-odd years which became the final straw for the gnarled little tree. I've been told that many a person endured the hot, half-mile trek, from the turn-out on the Glacier Point Road, to the top of Sentinel Dome, just to carry life-sustaining water to the dying tree. But it was too little, too late, and sometime during the summer of 1977, the Jeffrey Pine went the way we all must eventually go.

Nature went to great lengths and detail,

in the forming stage, to create the scenic wonders that have become our heritage, but occasionally it tires of a portion of its handiwork and exacts a change. Sometimes that change is abrupt. Witnessing the occurrence or aftermath of such a change leaves one with the feeling of perplexity because of the damage or destruction. One may even ask the question — "Why"? but an answer is never forthcoming.

In retrospect, the little pine never grew to be a very large tree because of its environment. An average-sized adult could stand on the shelf to which it clung and have one's head almost in its topmost branches. The tree may have been taller at one time for it appears that a vertical limb of unknown length was broken off, possibly during one of the howling gales of some time past.

Because of its shape, character, and location, the tree became a photographic landmark. Thousands of photographs of the Jeffrey Pine were taken by amateur and professional alike. It has been said that the Jeffrey Pine was the most photographed tree in the world — maybe, but in California, certainly. Many a landscape photographer as well as scores of nature lovers trudged the trail to the top of the dome to photograph the little pine and marvel at its tenacity to life.

It had a friendly nature, this little pine, and when one had climbed the last few yards of trail to its solitary stand, it seemed to greet you with a cheerful rustling of its needles from the sighing of the wind through its branches. On a hot summer day, as you rested in the shade of the little pine's branches from the rigors of the climb, the delectable aroma of its needles became apparent to your senses during a sometimes windless period.

All living things must eventually die and it is sad that some must go seemingly before their time. The pine's life cycle had progressed full circle and is now complete. No longer will it stand its lonely vigil atop Sentinel Dome, no more will it offer pleasure and the scent of its needles to those that climb to its secluded place. It will be sorely missed.

□

## RIVERSIDE COUNTY'S LARGEST 4-WHEEL-DRIVE HEADQUARTERS

Accessories for All Makes



### JOHNSON'S 4WD CENTER, INC.

7590 Cypress [at Van Buren]  
P. O. Box 4277  
Riverside, California 92504  
Telephone (714) 785-1330

## TREASURE HUNTERS — PROSPECTORS — Metal-Mineral Detectors

DREDGES  
DRY WASHERS MAPS  
BOOKS TOOLS ASSAY KIT  
SLUICE BOXES MINERAL LIGHTS  
LAPIDARY EQUIPMENT  
Send 25c for catalog to:

### AURORA

6286 BEACH BLVD.  
BUENA PARK, CALIF. 90620  
[714] 521-6321

### COE PROSPECTOR SUPPLY

9264 KATELLA  
ANAHEIM, CALIF. 92804  
[714] 995-1703

## PARADISE LODGE Travel Trailer & Camper Park

COMPLETE HOOKUPS

15 MILES NORTH OF BISHOP  
ON LOWER ROCK CREEK

- Fishing at your Campsite
- Overnights Welcome
- Daily, Weekly, Monthly Rates
- Restaurant & Cocktail Bar
- Housekeeping Cottages
- Hiking — Nature Trails
- Storage Area — Low Rates
- Secluded Area



MILES TO . . .  
Pleasant Valley 3  
Reservoir 3  
Tom's Place 8  
Crowley Lake 12  
Mammoth 25

**How To Get There**  
Drive North of Bishop  
on Hwy. 395 for 12  
miles — take Lower  
Rock Creek Road at  
foot of Sherwin  
grade — then 3 miles  
Paradise Lodge

For Reservations, write, phone or drop in:

PARADISE LODGE  
Route 2, Bishop, California 93514  
Phone (Area Code 714) 387-2370

# South Fork of Bow Willow Canyon

by DICK BLOOMQUIST

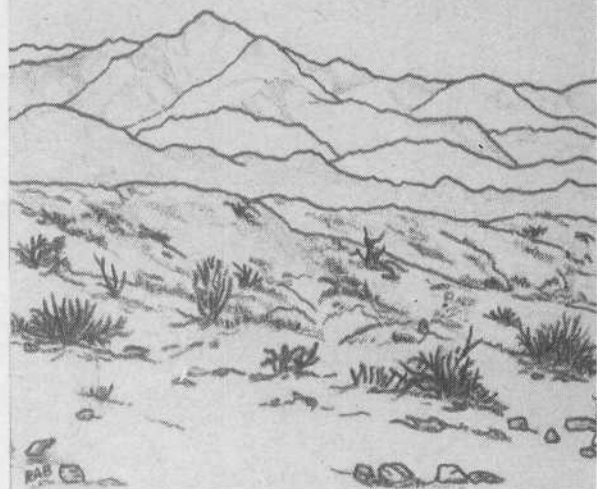
**M**ANY TALES are told concerning the naming of Bow Willow Canyon. The most widely accepted explanation recounts how the Diegueno Indians got willow wood for their bows there. Other versions maintain that the canyon was originally called "Bull Willow" because a man lost a bull in its depths or because bulls once gathered there; another account traces the name to a vigorous stand of willows ("bull" willows, therefore). But whether it be "bow" or "bull," the trees in question are not true willows, but desert willows [*Chilopsis linearis*], deciduous members of the bigonia family having long, narrow leaves and pinkish-white flowers.

The first leg of our journey to the South Fork is over a good dirt road linking Highway S2 with the state park's Bow Willow Campground and Ranger Station. Visitors may obtain water from Bow Willow Spring near the ranger station by working an old-fashioned pump handle, but a high fluoride content makes the water unsuitable for children. I have seen garnets as well as Indian potsherds on the edge of this small, secluded campground.

On the far side of the camp a sandy track veers left up Bow Willow Canyon, with its luxuriant stands of desert willow. The route pierces steep walls before coming to a halt three miles upstream in a little valley. A short distance before the road's end, the low ruins of an old cowboy cabin will be seen on the left; this stretch of roadway also furnishes a convenient place in which to turn around and park.

From the cabin site, the palm grove in the South Fork of Bow Willow Canyon lies approximately one mile to the left (south) of the road as one faces up-

*Sombrero Peak, over 4000 feet high, is the most prominent landmark in the Bow Willow country. View is from Sweeney Pass on Highway S2.*



stream, but before we begin hiking, some other nearby points of interest should be noted. First, the main channel of Bow Willow Canyon straight ahead also has palms, many of which are visible from the valley, but a thorough exploration of this oasis involves consid-

tery fragments are scattered about in many places, and outcrops on the elevated flat upstream and to the right from our parking spot contain several Diegueno grinding holes.

Now underway toward the South Fork oasis, I soon reached a point where the tributary entered the mountains and began to wind. Then I caught a glimpse of flashing palm crowns not far ahead and before long was standing beneath the trees — six dignified veterans between 30 and 35 feet in height arrayed in ground-length "grass skirts." Despite the absence of surface water, these undisturbed Washingtonias in their rugged, rocky canyon impressed me as being particularly vigorous and majestic. Desert lavender, sugar bush, jojoba, catsclaw, beavertail cactus, desert tea, brittlebush (also known as "incienso" [Spanish for "incense"], because the stems exude a resin that was burned as incense by the early padres), and other plants surround the grove, which probably lies just inside the state park boundary. Beyond the oasis the South Fork becomes quite steep and rough as it makes a bend to the right; there may be a few more Washingtonias farther upstream.

Next along our route is Carrizo Canyon, which cleaves the In-Ko-Pah and Jacumba ranges south of Bow Willow Campground. In tributaries of the main channel we'll explore three isolated, little-known groups of wild palms. □

## MILEAGE LOG

- 0.0 Junction of San Diego County Road S2 and dirt road to Mountain Palm Springs Primitive Camp in southern part of Anza-Borrego Desert State Park. Drive south on S2 toward In-state Highway 8.
- 1.1 Turn right off S2 onto Bow Willow Campground road (good dirt).
- 2.7 Bow Willow Ranger Station and Campground. Bear right, skirting campground.
- 2.9 Turn left up Bow Willow Canyon. **Depending on conditions, four-wheel-drive may be necessary in places beyond this point.**
- 5.7 South Fork palms visible in canyon off to left (south) of roadway.
- 5.8 Cabin ruins to left of roadway. Park near here (road ends short distance beyond ruins). Palm oasis in South Fork of Bow Willow Canyon is about one mile to left (south) of road. Elevation at palms roughly 1900 feet.

erable rock climbing, as does the hike to a cluster of Washingtonias high on the slopes of neighboring Sombrero Peak. It is necessary to move some distance southward into the center of the valley before the Sombrero grove comes into view. Signs of former Indian habitation make up a second area of interest. Pot-



## Idyllwild/San Jacinto Mountains

*Continued from Page 15*

Santa Rosa Mountain road, a graded dirt trail that climbs from 4,500 feet to 8,716 feet on Toro Peak, a square-mile isolated section of the Santa Rosa Indian Reservation not currently open to motor vehicles.

The Santa Rosas, actually a part of the same major mountain system as the San Jacintos, are generally considered as a separate area because of marked differences in climatic conditions, terrain, human population and animal life. Both are units of the vast Peninsular Range, a 1,200-mile-long spine north and south from Cabo San Lucas in Baja California to the San Geronimo Pass at Banning.

The alpine qualities of the San Jacinto-Santa Rosa region have made the area famous among backpackers and alpinists. Lily Rock, adjoining Tahquitz Peak just above Idyllwild and Fern Valley, for example, is a primary school or training site for would-be rock climbers from all over California.

The recreational potential of the San Jacinto Mountains is still being discovered by thousands of Southern Californians, particularly in this energy-conscious period. If the gas crunch tightens, Idyllwild residents can look forward to more weekend and vacation visitors because it is only 80 miles from Idyllwild to Los Angeles as compared to 250 miles to Yosemite or Mt. Whitney in the Sierras — and much of the scenic attraction is similar.

For many San Jacinto Mountains residents, particularly those who came there to slow down or retire, the proximity is an uncomfortable possibility.

Perhaps. But for many more, those whose livelihood depends on tourist dollars, the mileage factor is a comforting facet of life.

Garner Valley, much of it now in public ownership, offers the safety value for the mountain area. Huge Lake Hemet, an irrigation reservoir for the Hemet area, is a potential recreational attraction just barely tapped up to now, and primarily used for fishing.

The U.S. Forest Service and Riverside County maintain public campgrounds nearby and considerable acreage of the nearly 100-year-old Garner (nee Thom-

as) Ranch is being purchased by the federal government for additional camping and wilderness areas.

The only remaining semi-active mine in the San Jacinto-Santa Rosa complex also is nearby. This is the Hemet Belle, owned by D.C. Mayne of Hemet for many years, still worked sporadically for its known gold content. Many other abandoned mines are found here and in the north fork canyon of the San Jacinto River northwest of Idyllwild and Pine Cove.

Active cattle ranching continues on the Garner Ranch and at smaller spreads in the Anza-Terwilliger and Reed Valley areas of the mountains.

The Old West isn't dead in the San Jacintos. It is at least fitfully alive but sharing the limelight more and more with the New West, the recreational and residential expansion brought on by the continued population pressure from the Los Angeles metropolitan area.

Typical of this new interest are developments such as Silent Valley, a recreational vehicle enclave on Poppett Flats near the Banning escarpment at the north rim of the San Jacintos. There are several other residential fixed-home and RV oriented developments either underway or contemplated.

The old days on the Hill are not forgotten, as evidenced by a thriving historical society at Idyllwild, but they are sharing the clear air and the green forest vistas with the new days, as more and more Southern Californians, now more affluent and perhaps more energy conservation-conscious than ever before, discover this relatively small island in the sky of smoggy Southern California, winter and summer.

In less than a century of man's intensive use, the San Jacinto Mountains have become an invaluable resource, a haven of beauty and open space known for centuries to the Cahuilla Indians, its aboriginal population, but now equally important to literally millions of visitors.

The Cahuilla are still here also, with reservations at Santa Rosa and near Anza. As their white new-neighbors, the Cahuillas are sharing in the re-discovery as well.

The Hill it may be to some, but the San Jacinto-Santa Rosa enclave is more than that to most. It is a haven of sanity and serenity in the final quarter of the tumultuous 20th Century. □

## Historic Cedar City

*Continued from Page 11*

pinyon pines, as it climbs a steep alluvial fan toward a narrow cleft in Hurricane Ridge. This cleft is Fiddler Canyon. A number of side roads will be encountered but keep to the main road as indicated on the map. It is just one and seven-tenths miles from the highway to the base of the ridge.

At this point, the road dropped down (40 feet) into the creek bed and appeared to end at an old dam. A small stream of water hurried down the slope. We parked among the pinyon pines and found small agates all around us, as well as in the road.

Jerry hiked down to the dam and a short distance up the canyon, while I scouted south along the base of the ridge. Most of the specimens we collected were small but very colorful — red, green, orange-red, white and black moss. Later, we crossed the creek and found some fist-size chunks on the northern slopes. It was a fun day, in a beautiful setting. Rockhounds visiting the Cedar City region should also enjoy collecting Brianhead Agate (*Desert*, April 1978).

We found only one campground (K.O.A.) in Cedar City and overnight parking was quite crowded on the asphalt. They had a half-dozen spaces on grass among the trees, which were generally occupied by people staying several weeks or longer. Fortunately, one space was open and we found ourselves happily parked between a young man attending college and a friendly retired couple from Long Beach, California.

Our stay in Cedar City was filled with days spent visiting ghost towns, historical sites, old mines and geological points of interest. We wandered around the Valley and climbed to dizzying heights (10,000 feet) on the Markagunt Plateau.

It was late fall and the aspen leaves had faded but the brilliant golden blooms of rabbit brush greeted us everywhere. A low winter sun seemed to heighten the colors in the red, pink, tan, beige and brown sandstone formations. Even the lakes seemed bluer. This combination of magnificent scenery and unlimited recreation makes this section of Utah's Color Country a vacationland you'll not want to miss. □

# What's Cooking on the Desert?

by STELLA HUGHES

## Apples!

**A**LTHOUGH SEPTEMBER ushers in the apple season, apples rate high in appetite appeal all year round for everyone from toddlers to grannies.

When I started this column on apples, I thought it would be simple as apple pie. Well, that's what I thought! There's so darned many really superlative recipes calling for fresh apples, green apples, dried apples, apple sauce, apple cider or juice; there's baked apples, fried, stewed and candied; some have old-fashioned names of "apple slump" (dumplings), "apple Charlotte" (pudding with meringue), "apple sponge" (deep dish lined with slices of sponge cake moistened with wine). Then there's Apple Pan-dowdy, Apple Brown Betty, Apple Snow, just to name a few. The combinations of "apples with" are endless. Mated with apples, rice pudding can become a gourmet dish, as the combination of tart apples and cranberries can become a winner. Any ordinary everyday bread pudding, with apples added becomes a "company" dish.

My favorite apple pie sounds so

simple it's hard to believe it's a prize winner. I've heard some men swear there's no such thing as a bad apple pie. Well, maybe so — but it's a cinch some are better than others, and Apple Crunch Pie is better than most.

### Apple Crunch Pie

Enough apples sliced thin for one 9-inch pie

1 cup sugar

#### Topping

½ cup brown sugar

½ cup flour

½ teaspoon cinnamon

½ cup margarine

¼ teaspoon ginger

Mix enough pie dough for one pie shell. Line 9-inch pie tin with pastry dough. Place sliced apples and one cup sugar in crust. Mix rest of ingredients and spread over top of pie. Bake at 375 degrees until apples are done.

Good apple pie, naturally, depends on the type of apples used. Tart apples are a must, and never use over-ripe or mealy apples for pie. To play safe, if I think apples need peppering up, I add some lemon juice, or even a few drops of cider vinegar won't hurt. So, select apples that are tart and crisp, such as McIntosh,

Winesap, York, Rome Beauty or Jonathan. Red or yellow Delicious apples are eating apples and not for pies or baking.

### Red Cinnamon Apple Pie

Just one look at this pie and everyone wants a slice. Red Cinnamon candies give the filling a bright color and true cinnamon flavor—and a lattice top lets the filling peek through.

Make pie dough for top and bottom of a 9-inch pie pan.

#### Filling:

Combine ¾ cup of sugar and ½ cup pineapple juice and ¼ cup of red cinnamon candies. Bring to boil and simmer until all candies are melted.

Prepare 5 cups of sliced tart apples (about 5 or 6 medium apples). Coat apples with ¼ cup of flour and add to cinnamon syrup. Cook over medium heat until thickened, turn into pie shell. Dot with butter. Cover with lattice strips. Sprinkle about one tablespoon sugar, mixed with a small amount of powdered cinnamon over top of crust. Bake at 425 degrees for about 10 minutes, then turn down to 350 degrees, continue baking until apples are done, perhaps another 30 minutes. Cooking time depends on type of apples used.

Last fall we had a super bumper crop of apples. Apples overflowed the pantry, the back porch, the patio and yard. There were so many apples I spent the fall and winter drying them. Just plain dried apples soon palled, and I started experimenting with spices and sweeteners for a change. Here are the winners by grandkids vote.

Peel and core apples, slice and sprinkle with brown sugar and cinnamon over all. Toss in large dishpan until apples are covered, then spread on screens or trays to dry. I dried mine on a sunny screen porch on old door screens. Unless covered with cheese cloth it's impossible to dry sugared apples outside. Millions of bees are attracted (and flies) but those using their oven or food dryers have it made. It takes longer to dry fruit with sugar added, but the time is well spent.

Another batch was made by adding a large can of lemonade concentrate (frozen) with a small amount of water, and tossing apples in solution until well-covered. Drip-dry a few moments on paper toweling, then spread on drying racks. Again it takes longer but the resulting tangy slices are a real snack treat.



Probably the most popular of all are the apples I dried that were treated with red cinnamon candies. I melted a large package of red hots in two cups of water until all candies were dissolved. Sliced apples were well coated with the syrup and dried the usual way. *Good.*

#### Dried Apple Cake

- 2 cups dried apples
- 1 cup sugar
- $\frac{2}{3}$  cup butter
- 2 teaspoons baking powder
- 2 eggs
- 3 cups flour
- 1 cup raisins
- 1 cup molasses
- 1 cup milk
- 1 teaspoon soda (level)

nutmeg and cinnamon as desired

Soak dried apples in cold water for 3 hours; then chop them about the size of raisins and boil for 15 minutes in the molasses. Dissolve soda in a little hot water and add to molasses and apples when cold. Then mix all other ingredients, beat well and pour into cake pan that has been greased and dusted with flour. Bake in moderate oven until done.

#### Apple and Bread Pudding

Take about one quart of stewed apples with one cup of raisins, sugar, spices and lump of butter. Arrange in baking dish, bread crumbs about three-fourths deep. Pour apple and raisin mixture over bread crumbs, then add another layer of bread crumbs as before. To top, beat three eggs with one cup of white sugar, two cups of milk,  $\frac{1}{2}$  teaspoonful vanilla and a dash of salt. Pour over bread and apples and bake in moderate oven until pudding is set. Serve with cream, when cold.

#### Dutch Oven Baked Apples

- 6 good-sized cooking apples (not Delicious)
- $\frac{1}{2}$  cup brown sugar
- 1 teaspoon cinnamon
- 1 teaspoon nutmeg
- $\frac{1}{4}$  cup white sugar
- 1 cup raisins
- nuts if desired

Core apples, but not completely through. Leave a half-inch or so of core in the bottom. Mix sugar and spices with raisins and stuff center of apples with mixture. Dot tops with real butter. Place close together in Dutch oven or baking pan. Pour several cups of water in bottom of baking container and bake until apples are tender. ☐

**TRAVEL GUIDE MAP  
FOR SOUTHERN UTAH**

Covering an area from  
St. George to Gainesville  
and from  
Kanab to Koosharem

**Desert**  
MAGAZINE  
map  
of  
**SOUTHERN  
UTAH**  
Back Country Travel Guide

**GHOST TOWNS  
OLD FORTS  
HISTORIC TRAILS  
CAMPGROUNDS  
HIKING TRAILS  
POINTS OF INTEREST  
FOUR-WHEEL-DRIVE ROADS**

Featuring 31 tours or points of interest. Most have appeared in the pages of past issues of **DESERT MAGAZINE.**

**2<sup>50</sup>**

Add 75¢ postage/handling  
Calif. residents please add 6% state sales tax

Order today from:

**DESERT MAGAZINE**

P.O. Box 1318, Palm Desert, California 92260

# The Trading Post

## • BOOKS-MAGAZINES

YES, THERE REALLY is a Cucamonga. "Light Over the Mountain" (revised edition). A romantic look at the history of Cucamonga, California. Over 300 pages and 70 photos. Clothbound. \$11.95 including \$1.00 postage and handling. California residents please add 66c sales tax. California Family House, Dept. DM, P. O. Box 1418, Upland, California 91786.

DESERT MAGAZINES—April 1940, Vol. 3, No. 6 to February 1977, Vol. 40, No. 2. \$300.00 or best offer. F.O.B. Lyons, Colorado. Don Jordan, P. O. Box 486, Lyons, Colorado 80540. Phone 303-823-6775.

## • BUSINESS OPPORTUNITIES

50 FIRMS seeking mailers, homeworkers, addressers. For list rush \$1.00, stamped, self-addressed envelope. Darene Cowan, 159 Main St., Rogersford, PA 19468.

EARN UP TO \$500.00 monthly in spare time clipping news items from local newspapers. More details, rush 25c and self-addressed stamped envelope to McAuley Enterprises, P.O. Box 567b, Lancaster, Calif. 93534.

YOU CAN write, publish, distribute and keep the profits on your how-to-do-it book as I am doing now. Details \$3.00. CBC, P. O. Box 2591, Chula Vista, California 92012.

\$20,000/MONTH possible in mailorder! Free details. Send #10 self-addressed, stamped envelope to: Stimson, Box 249-la, Lakewood, Calif. 90714.

## • DESERT PAINTINGS ART

SEE KINGSLEY OSMUND HARRIS original Desert Paintings display in Desert Magazine's Western Art Gallery, Palm Desert, California.

## • EQUIPMENT

PRECISION LAPIDARY Abrasive Compounds for tumbling, polishing and grinding. Send for free catalogue and price list. MDC Industries, 400 West Glenwood Avenue, Philadelphia, PA. 19140. Dealer Inquiries invited.

## • GEMS

SHAMROCK ROCK SHOP, 593 West La Cadenena Dr., Riverside, California 92501. Parallel to Riverside Freeway. Phone 686-3956. Come in and browse; jewelry mountings, chains, supplies, minerals, slabs, rough material, equipment, black lights, metal detectors, maps, rock and bottle books.

## • MAPS

OLD STATE, Railroad, County Maps. 70-110 years old. All States. Stamp for catalog. Northern Map, Dept. DM, Dunnellon, FL. 32630.

## • MINING

ASSAYS—Gold & Silver \$10.00. High quality spectrographic analysis for 65 metals \$9.00. Free price list. Reed Engineering, 2166 College Ave., Costa Mesa, Calif. 92627.

## • PROSPECTING

DRYWASHERS! GOLD CONCENTRATORS! Guaranteed to recover minerals, gold. A hobby that pays for itself! Write to: Nick's Nugget, P. O. Box 1081, Fontana, California 92335. (714) 822-2846.

PLACER GOLD \$2.00, Black sand and placer gold (mixed), \$2.00. Placer Gold Nuggets \$1.00 to \$300.00 sizes. Prospector Jack Ward, Box 380, Sandia Park, New Mexico 87047.

CAL-GOLD announces the opening of its new store at 2400 East Foothill, Pasadena, California 91107. Metal detectors, maps, books, prospecting equipment. Write for catalog and details of grand opening contest.

## • REAL ESTATE

NORTHEASTERN NEVADA desert round redwood home 4½ years old w/vw. on 5 acres. 2400 sq. ft., 3 BRs, 3 Baths, Family Room, 2 car garage, fully panelled and insulated. Taxes approximately \$500 year. \$120,000.00 702-738-8732 eves.

## • SEEDS & PLANTS

JOJOBA—25 clean seed, instructions. \$1.50 prepaid. Indian Trail Nursery, Star Rt. 2, Box 75, Twentynine Palms, California 92277.

## • TREASURE FINDERS

TREASURE—Locate quarter mile away with ultrasensitive locator—brochure free. Research Products, Box 13441-BUC, Tampa, Florida 33611

INSTANT RICHES—Explore ghost towns. Find buried treasure, coins, relics, antiques, and more. Goldak—the finest "Metal and Treasure Locators since 1933." Send for free catalog. Goldak, Dept. D, 626 Sonora Avenue, Glendale, California 91201.

## • MISCELLANEOUS

COLLECTORS' ITEMS—Authentic 1800's railroad stocks engraved with high smokestack locomotives—framed or unframed. Free list. Helen Ford, 1110 Miller Place, Golden, Colorado 80401

BELLEW MEMORIAL ARTHRITIS Medical Clinic, D.H.S., Calif. Practice limited to the Bellw Vaccine Method of treating arthritis. Desert sun and climate. Phone 714-329-8723. Write P. O. Box 305, D.H.S., California 92240.

## HOW TO PLACE YOUR TRADING POST AD

Mail your copy and first-insertion remittance to: Trading Post, Desert Magazine, Palm Desert, Calif. 92260. Classified rates are 25c per word, \$5.00 minimum per insertion.

Deadline for  
Classified Ads  
is 10th of second  
month preceding  
cover date.



Clyde Forsythe's Famous . . .

## Gold Strike Series

Four Mining Camp Scenes

All In 4-Color

Each 14"x17" with white margins  
on high quality paper suitable for  
framing.

No lettering or folds.

**\$500**

Mail all orders to:  
DESERT Magazine  
Box 1318  
Palm Desert, Calif. 92260



# MAPS! MAPS!

## DESERT OVERVIEW MAPS

Using topographic maps as basic underlays, are two excellently detailed maps for back country explorers of the Mojave and Colorado Deserts. Maps show highways, gravel routes, Jeep trails, plus historic routes and sites, old wells, which are not on modern-day maps, plus ghost towns, Indian sites, etc. **Mojave Desert Overview** covers from U.S. 395 at Little Lake to Boulder City, Nevada, to Parker Dam to Victorville. **Colorado Desert Overview** covers from the Mexican border to Joshua Tree National Monument to Banning to the Arizona side of the Colorado River. Be certain to state which map when ordering.

\$3.00 each

## ANZA-BORREGO DESERT STATE PARK TOPOGRAPHIC MAPS

A set of 7 maps covering the Anza-Borrego Desert State Park, 8½"x11" format, spiral bound. **\$5.50**

## JOSHUA TREE NATIONAL MONUMENT UPDATED TOPOGRAPHIC MAPS

A set of 12 maps covering the Joshua Tree National Monument, 8½"x11" format, spiral bound. **\$7.95**

## MAP OF PIONEER TRAILS

Compiled by Varna Enterprises, this is their new large map on pioneer trails blazed from 1541 through 1867 in the western United States. Superimposed in red on black and white, 37"x45" **\$4.00**

## ROADMAP TO CALIFORNIA'S LOST MINES AND BURIED TREASURES

Compiled by Varna Enterprises, 38"x25" and scaled Southern California on one side and Northern California on the other. **\$4.00**

## MAPS OF THE OLD WEST

Printed in two colors on rich Parchment papers; each map has the rustic appeal of the Old West. Hundreds of sites—names, dates and descriptions of places and events associated with the Old West, including ghost towns, old forts, old mines, lost and legendary gold, Indian tribes, battle sites and early trails.

**Arizona Lost Mines & Ghost Towns \$1.50**  
**Calif. Lost Mines & Ghost Towns \$1.50**  
**Nevada Lost Mines & Ghost Towns \$1.50**  
(Each above map 17"x22")

**The Historic West—23"x30" \$2.00**  
(Includes the 11 western states)

**Arizona Treasure Map—30"x38" \$2.00**  
(Field Map)

Please add 50c for Postage/handling

Calif. residents add 6% state sales tax

Order from

**Desert Magazine Book Shop**

P. O. Box 1318, Palm Desert, Calif. 92260



# WORTH SAVING!

## \$5.50 EACH

Including tax and postage

Gold embossed on brown vinyl. Space for 12 magazines easily inserted. A beautiful and practical addition to your home bookshelf.

MOST OF OUR READERS SAVE THEIR DESERT MAGAZINES FOR FUTURE REFERENCE AND READING PLEASURE. THE BEST WAY TO KEEP YOUR BACK ISSUES IS IN OUR ATTRACTIVE SPECIALLY-MADE

# BINDERS

## DESERT MAGAZINE

P. O. BOX 1318, PALM DESERT, CALIFORNIA 92260

## REPLACEABLE SUBSCRIPTION FORM

September 1979

# Desert

☐ Check here if you wish this issue replaced.

P. O. Box 1318, Palm Desert, California 92260

☐ ENTER A NEW SUBSCRIPTION

☐ RENEW MY PRESENT SUBSCRIPTION

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

ZIP CODE \_\_\_\_\_

☐ SEND GIFT SUBSCRIPTION TO:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

Sign Gift Card: "From \_\_\_\_\_"

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

Sign Gift Card: "From \_\_\_\_\_"

One Year **\$9.00**

Two Years **17.00**  
(Or Two 1-Year)

Three Years **25.00**  
(Or three 1-Year)

Foreign subscribers add \$2.00/year postage.

☐ PAYMENT ENCLOSED

☐ BILL ME LATER

☐ ALSO SEND DESERT'S 12-ISSUE HANDSOME BROWN VINYL BINDER FOR \$5 50 (Includes tax and postage)

Date Binder(s) with Year(s) ☐ Undated

# BOOKS OF

**GHOST TOWNS OF THE COLORADO ROCKIES** by Robert L. Brown. Written by the author of *Jeep Trails to Colorado Ghost Towns*, this book deals with ghost towns accessible by passenger car. Gives directions and maps for finding towns along with historical backgrounds. Hardcover, 401 pages, \$9.95.

**HISTORICAL ATLAS OF CALIFORNIA** by Warren A. Beck and Ynez D. Hasse. Extensive documentation and pertinent detail make this atlas a valuable aid to the student, scholar and every one interested in the Golden State. 101 excellent maps present information on the major faults, early Spanish explorations, Mexican land grants, routes to gold fields, the Butterfield and Pony Express routes, CCC camps, World War II Installations, etc. Hardcover, large format, extensive index, \$12.50.

**HISTORICAL ATLAS OF NEW MEXICO** by Warren A. Beck and Ynez D. Hasse. Geographical data, sites of prehistoric civilizations, events of history, first towns, stagecoach lines, historic trails, etc., are included in this comprehensive atlas. Excellent maps, index. Hardcover, large format, highly recommended, \$9.95.

**HOPI KACHINA DOLLS [With a Key to Their Identification]**, by Harold S. Colton. Kachina dolls are neither toys nor idols, but aids to teaching religion and tradition. This is a definitive work on the subject, describing the meaning, the making and the principal features of 266 varieties of Kachina dolls. Line drawings of each variety, plus color and b/w photos make it a complete guide to learn more of the richness of American Indian culture. Paperback, 150 pages, \$4.50.

**ALIVE IN THE DESERT**, The complete guide for desert recreation and survival, by Joe Kraus. A handy volume that is worth its weight in your backpack or daypack on all your desert travels, by car or on foot. The author is a longtime desert writer who has been there himself. Paperback, 113 pages, \$5.95.

**DEATH VALLEY: Geology, Ecology, Archaeology**, by Charles B. Hunt. Death Valley has long been a place of fascination for people the world over, and much has been written about it. Now, however, all aspects of this famous (or infamous) desert have been brought together in this book. Lavishly illustrated with 163 photos and line drawings, 234 pages. Paperback, \$6.95.

**HIGH MOUNTAINS & DEEP VALLEYS** by Lew and Ginny Clark, with photographs by Edwin C. Rockwell. A history and general guide book to the vast lands east of the High Sierra, south of the Comstock Lode, north of the Mojave Desert and west of Death Valley, by oldtimers who know the area and have since birth. Paperback, 192 pages, 250 photographs and many maps. \$6.95.

**SHADY LADIES OF THE WEST** by Ronald Dean Miller. Everyone knows that the harlot was the vanguard of every move westward, and that she was as much of a part of the western scene as the marshal, the badman, the trail-hand or the rancher. Many are the reasons she has been neglected by the historian—none of them valid. Author Miller, in this enlightening book, seeks to remedy some of the paucity of information on the American pioneers of this ancient profession. Hardcover, comprehensive bibliography, 224 pages, \$7.95.

**FIELD GUIDE TO WESTERN BIRDS** by Roger Tory Peterson. The standard book for field identification sponsored by the National Audubon Society. Second Edition, enlarged, 658 photos in full color. Strong, durable paperback, \$6.95.

**GHOST TOWN: El Dorado** by Lambert Florin. The colorful, outrageous characters of the Western mining towns come to life on every page of this fascinating volume crammed with photos of ghost towns in Colorado, California, Arizona, Utah, etc., plus exciting history and anecdotes. 246 photos and illustrations. Large format, hardcover, originally published at \$12.95, now priced at \$5.95.

**MINES OF THE MOJAVE** by Ron and Peggy Miller covers the numerous mining districts running across the upper Mojave Desert from Tropic, west of the town of Mojave, to Mountain Pass, a little west of the Nevada border. Paperback, 67 pages, \$2.50.



**LOST MINES AND BURIED TREASURES OF THE WEST**, Bibliography and Place Names from Kansas West to California, Oregon, Washington and Mexico. This large, easy-to-use volume lists the works of more than 1100 different authors, covering thousands of stories of lost mines and buried treasures supposedly located in 15 Western and Southwestern states and in Mexico. An important basic research tool for historians, geologists, geographers, anthropologists, archaeologists and folklorists. Hardcover, 593 pages, \$27.50.

**WILLIE BOY**, by Harry Lawton. The story of an incomparable Indian chase, its unexpected conclusion, woven into an authentic turn-of-the-century history of California's Twentynine Palms country. This desert classic offers rare insights into Indian character and customs, as well as a first-hand look at a colorful desert region as it was nearly a century ago. Historic photographs and colorful maps, paperback, \$4.95.

**ANZA-BORREGO DESERT GUIDE BOOK**, Southern California's last frontier, by Horace Parker, revised by George and Jean Leetch. A classic reference to America's largest desert park, originally published in 1957 and now updated, enlarged and improved by the "dean of desert rangers" and his wife. With excellent logs, maps and photographs brought up to 1979 standards. Paperback, 154 pages, two maps, many photos, \$6.95.

**A SOUTHERN CALIFORNIAN'S GUIDE TO WILD FOOD** by Christopher Nyerges. This newly published manual describes the most common plants of So. California in detail and tells how to include them into your diet. Beat the high cost of food by utilizing free wild food in backyards, vacant lots and wilderness areas. Many recipes included. Paperback, \$4.95.

**ARIZONA TREASURE HUNTERS GHOST TOWN GUIDE** by Theron Fox. Early maps of 1868 and 1881 show 1,200 place names, roads, forts, early county arrangements, mining districts, ghost towns, steamboat landing, mountain ranges, lakes, etc. A handy reference. Paperback, \$1.95.

**WESTERN GEM HUNTERS ATLAS** by Cy Johnson and Son. A helpful book of detailed maps showing gem and mineral locations, from California to the Dakotas and British Columbia to Texas. Markings note private claims, gem claims (fee charged) and rock and gem locations. Also suggested reading for more detail on areas included and other rich areas not included in this publication. Paperback, maps galore, collector's library, 79 pages, \$4.00.

**MINES OF THE SAN BERNARDINOS** by John W. Robinson. The largest gold rush in the southern regions of the Golden State took place in the San Bernardino mountains. John tells of this and many other strikes that led to the opening of this high wooded area. Paperback, illustrated, 72 pages, \$2.50.

**DESERT GEM TRAILS** by Mary Frances Strong. *DESERT Magazine's* Field Trip Editor's popular field guide for rockhounds. The "bible" for both amateur and veteran rockhounds and back country explorers, and covers the gems and minerals of the Mojave and Colorado Deserts. Heavy paperback, 80 pages, \$2.50.

**SOVEREIGNS OF THE SAGE** by Nell Murbarger. A collection of previously told tales about the people and the places of the great American Southwest by the original author, a longtime reporter of the desert. Many photographs, some of them now lost, several excellent Norton Allen Maps. Paperback, \$7.95.

**BAJA CALIFORNIA GUIDEBOOK** by Wali Wheelock and Howard E. Gulick, formerly Gerhard and Gulick's *Lower California Guidebook*. This totally revised fifth edition is up-to-the-minute for the Transpeninsular paved highway, with new detailed mileages and descriptive text. Corrections and additions are shown for the many side roads, ORV routes, trails and little-known byways to desert, mountain, beach and bay recesses. Folding route maps are in color and newly revised for current accuracy. Indispensable reference guide, hardcover, \$10.50.

**A FIELD GUIDE TO THE COMMON AND INTERESTING PLANTS OF BAJA CALIFORNIA** by Jeanette Coyle and Norman Roberts. Over 250 plants are described with 189 color photos. Includes past and present uses of the plants by aborigines and people in Baja today. Scientific, Spanish and common names are given. Excellent reference and highly recommended. 224 pages, paperback, \$8.50.

**BACK ROADS OF CALIFORNIA** by Earl Tholander and the Editors of *Sunset Books*. Early stagecoach routes, missions, remote canyons, old prospector cabins, mines, cemeteries, etc., are visited as the author travels and sketches the California Backroads. Through maps and notes, the traveler is invited to get off the freeways and see the rural and country lanes throughout the state. Paperback, large format, unusually beautiful illustrations, 207 pages, \$6.95.

**TEMALPAKH** by Lowell John Bean and Katherine Siva Saubel. Temalpakh means "from the earth," in Cahuilla, and covers the many uses of plants used for food, medicine, rituals and those used in the manufacturing of baskets, sandals, hunting tools; and plants used for dwellings. Makes for a better understanding of environmental and cultural relationships. Well illustrated, 225 pages, hardcover, \$10; paperback, \$6.50.

**FIELD GUIDE TO ROCKS AND MINERALS** by Frederick H. Pough. Authoritative guide to identification of rocks and minerals. Experts recommend this for all amateurs as one of the best. Many color illustrations. Paperback, \$5.95.



# THE WEST

Please add 50c per total order  
for Handling/Postage  
Calif. add 6% state sales tax

**GHOST TOWNS OF ARIZONA** by James and Barbara Sherman. If you are looking for a ghost town in Arizona this is your warbill. Illustrated, maps, townships, range, co-ordinates, history, and other details make this one of the best ghost town books ever published. Large 9x11 format, heavy paperback, 208 pages, \$5.95.

**TRACKING DOWN OREGON**, by Ralph Friedman. An excellent general history of California's northern neighbor, which has as much desert of a different description plus a lot of sea coast and exciting history. Many photographs of famous people and places and good directions how to get there. Paperback, 307 pages, more than 100 photographs, \$5.95.

**BACKPACKING GUIDE TO SAN DIEGO COUNTY**, by Skip Ruland. An informative, no-nonsense primer to day hiking and extended several-day trips into the Southern California mountain and desert back country, covering more territory than the title suggests. Also this little book contains emergency information useful wherever you hike or travel in the back country. Paperback, 80 pages, several maps and sketches, \$2.95.

**THE KING'S HIGHWAY IN BAJA CALIFORNIA** by Harry Crosby. A fascinating recounting of a trip by muleback over the rugged spine of the Baja California peninsula, along an historic path created by the first Spanish padres. It tells of the life and death of the old Jesuit missions. It describes how the first European settlers were lured into the mountains along the same road. Magnificent photographs, many in color, highlight the book. Hardcover, 182 pages, large format, \$14.50.

**LIMBO** by Carobeth Laird. A chilling but fascinating personal memoir of life in a nursing home by a survivor, who was also the author of *Encounter with an Angry God* and *The Chemehuevis*. Mrs. Laird was 79 during the experiences she describes, and 81 when she completed this book, already being hailed as a landmark work for potential change in the nursing home scene. Paperback, 178 pages, \$5.95.

**ELECTRONIC PROSPECTING with the VLF/TR Metal/Mineral Detector**, by Charles Garrett, Bob Grant and Roy Lagal. A handy reference for anyone using late-model metal detectors, written by experts in this expanding field. Contains many hints on how to find gold and other treasure ores and artifacts with a good bibliography and appendix. Paperback, 86 pages, numerous illustrations, \$3.95.

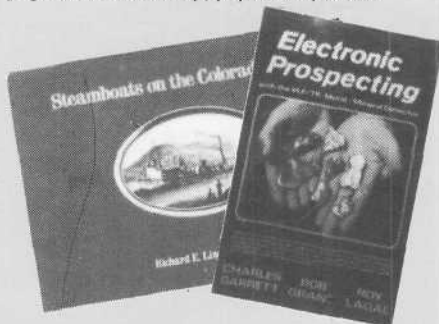
**OWYHEE TRAILS** by Mike Hanley and Ellis Lucia. The authors have teamed to present the boisterous past and intriguing present of this still wild corner of the West sometimes called the I-O-N, where Idaho, Oregon and Nevada come together. Hardcover, 225 pages, \$9.95.

**CALIFORNIA GHOST TOWN TRAILS** by Mickey Broman. Thirty-six photographs showing some of the old towns as they appear today, not as they did 50 or 100 years ago. Thirty-six maps with detail mileage to the ghost towns, shown to the tenth of a mile. Interesting and historical data for treasure hunters, rockhounds, bottle collectors and western-love enthusiasts. Paperback, \$2.95.

**WILDLIFE OF THE SOUTHWEST DESERTS** by Jim Cornett. Written for the layman and serious students alike, this excellent book on all the common animals of the Southwest deserts. A must for desert explorers, it presents a brief life history of everything from ants to burros. Paperback, 80 pages, illustrated, \$3.95.

**CALIFORNIA-NEVADA GHOST TOWN ATLAS and SOUTHWESTERN GHOST TOWN ATLAS** by Robert Neil Johnson. These atlases are excellent do-it-yourself guides to lead you back to scenes and places of the early West. Some photos and many detailed maps with legends and bright, detailed descriptions of what you will see; also mileage and highway designations. Heavy paperback, each contains 48 pages, each \$2.00.

**JEEP TRAILS TO COLORADO GHOST TOWNS** by Robert L. Brown. An illustrated, detailed, informal history of life in the mining camps deep in the almost inaccessible mountain fastness of the Colorado Rockies. 58 towns are included as examples of the vigorous struggle for existence in the mining camps of the West. Illustrated, 239 pages, end sheet map, paperback, \$6.95.



**THE BAJA FEELING**, by Ben Hunter. Not just another turista invasion book about Baja, but an entertaining and informative report on the trials and tribulations of weekending and finally, homebuilding in Baja California, by a charming writer who admits he doesn't know everything. A refreshing change! Hardcover, 334 pages, photographs and drawings, \$8.95.

**BALLARAT**, Compiled by Paul Hubbard, Doris Bray and George Pipkin. Ballarat, now a ghost town in the Panamint Valley, was once a flourishing headquarters during the late 1880s and 1900s for the prospectors who searched for silver and gold in that desolate area of California. The authors tell of the lives and relate anecdotes of the famous old-timers. First published in 1965, this reprinted edition is an asset to any library. Paperback, illustrated, 98 pages, \$3.00.

**THE BLACK ROCK DESERT**, by Sessions S. Wheeler. One of Nevada's least-known and most scenic historical desert areas is described by the state's leading professional historian and author. Black Rock is part of the huge Great Desert Basin and was the setting for Indian battles and several tragic incidents during the 1849 California Gold Rush. Paperback, 186 pages, many black and white photographs, sketches and maps, \$4.95.

**A FIELD GUIDE TO MAMMALS** by William H. Burt and Richard P. Grossenheider. Identifies 380 species of wild mammals of North America north of Mexico, with all necessary recognition information. Contains 200 animals shown on superb color plates. Range maps show at a glance the area where each species occurs. Heavy durable paperback, \$5.95.

**THE SEA OF CORTEZ, The Gulf of California, Baja, and Mexico's Mainland Coast** by Ray Cannon and the Sunset Editors. A rich and colorful text acquaints the traveler and outdoorsman with the history, people, climate and travel opportunities of this exciting wonderland. Each of the 12 regions that make up the Gulf of California is covered in a separate chapter with a special section on how to catch "Cortez fishes." Large format, hardcover, 272 pages, \$14.95.

**STEAMBOATS ON THE COLORADO RIVER, 1852-1916**, by Richard E. Lingenfelter. The first comprehensive, illustrated history of steamboating on the entire length of the Colorado River and its principal tributaries. Covering nearly a century of western history, this book fills a real need and joins the gaps in the saga of marine navigation in the arid desert. Many maps, illustrations and a list of all the river steamers. Paperback, 195 pages, \$9.50.

**BURIED TREASURE & LOST MINES** by Frank Fish. One of the original treasure hunters provides data on 93 lost bonanzas, many of which he personally searched for. He died under mysterious circumstances in 1968 after leading an adventurous life. Illustrated with photos and maps. Paperback, 68 pages, \$2.00.

**NEVADA PLACE NAMES** by Helen S. Carlson. The sources of names can be amusing or tragic, whimsical or practical. In any case, the reader will find this book good reading as well as an invaluable reference tool. Hardcover, 282 pages, \$15.00.

**ARIZONA PLACE NAMES** by Will C. Barnes, Revised and enlarged by Byrd H. Granger. Excellent reference book with maps, Biographical Information and Index. Large format, hardcover, 519 pages, \$11.50.

**CALIFORNIA PLACE NAMES** by Erwin G. Gudde. This book presents the story of thousands of geographical names of California, giving their dates, circumstances of naming, their origin and evolution, their connection with our national history and their relation to the California landscape. This third edition incorporates many new entries and extensive revisions to older entries. An important addition is the reference list of obsolete and variant names. Hardcover, 416 pages, \$18.50.

**CALIFORNIA II — Photography** by David Muench, Text by Don Pike. Travel from mountain to seacoast to fertile farmlands exploring remote and hidden valleys, populous cities and isolated ghost towns, discovering the beauties and variety of this Golden State. 165 beautiful 4-color photographs, large format, \$29.50.

**FIELD GUIDE TO ANIMAL TRACKS** by Olaus J. Murie [Peterson Field Guide Series]. This comprehensive book helps you recognize and understand the signs of all mammals—wild and domestic—on this continent, as well as those of many birds, reptiles and insects. More than 1000 drawings; individual tracks, different track patterns, animals in their habitats, droppings, gnawed trees—all the types of clues the tracker needs. Strong, durable paperback, \$5.95.

**THE CREATIVE OJO BOOK** by Diane Thomas. Instructions for making the colorful yarn talismans originally made by Pueblo and Mexican Indians. Included are directions for wall-hung ojos, necklaces, mobiles and gift-wrath tie-ons. Well illustrated with 4-color photographs, 52 pages, paperback, \$2.95.

**DESERT EDITOR** by J. Wilson McKenney. This is the story of Randall Henderson, founder of DESERT Magazine, who fulfilled a dream and who greatly enriched the lives of the people who love the West. Hardcover, illustrated with 188 pages, \$7.95.

**RAILROADS OF ARIZONA VOL. I** by David F. Myrick. More than 30 railroads of Southern Arizona are presented, together with 542 nostalgic illustrations, 55 special maps and an Index. A valuable travel guide and a reliable historical reference. Large format, hardcover, 477 pages, \$19.50.



*Very old artifacts being found at this Yuha Desert site may be more than 10,000 years old. Here a team from Imperial Valley College, El Centro, excavate a habitation site. BLM's Yuha Visitor Center will be constructed nearby.*

### **Archeological Studies**

*Continued from Page 23*

#### *Yuha Visitor Center: Site of Early Man?*

Members of the staff at Imperial Valley College Museum, El Centro, and a class taught by Von Werlhof excavated house sites at the Yuha location. At one site they found about 1,500 items associated with a past culture.

The artifacts include very old crude tools used for chopping and battering. Von Werlhof is convinced that people

lived at the site at least 10,000 years ago, but he believes it is too early to estimate the age of the artifacts.

"There are a lot of opinions," he said, "but I'm not ready to make an estimate. We have enough information to reconstruct lifestyle and technologies, but we need carbon dating to obtain a reliable age."

He said emphasis will be changed next year from surveying to excavation. The purpose of the new program will be to determine and cross-check the age of

the materials. He believes it will be three years before he has the answer.

Discoveries in the area so far include two "snake" intaglios (rock alignments). One is 520 feet long, the other 900 feet long. Von Werlhof said both are very similar to the intaglio styles found elsewhere in Imperial County.

The thousands of artifacts removed from the site will be taken to laboratories at the college where they will be washed, measured, weighed, typed, tested, cataloged, sketched, written up and photographed.

"BLM is getting a \$25,000 job for \$5,000," Von Werlhof said.

#### *McCain Study*

Three teams of archeologists, each with four members, closely examined a 7,000-acre sample of the 98,000-acres to obtain information for the McCain Valley Environmental Statement. The area boundaries coincide with those of BLM's Eastern San Diego County Planning Unit.

The area is rich in cultural resources. In many places it had abundant food and water for the Northern and Southern Diegueno Indian peoples. It is believed that the Cahuilla and Kamia peoples also lived in some of the numerous mountain ranges of the study area. These ranges include the Inkopah, Jacumba, Tierra Blanca and Cayote.

Kaldenberg said it is believed that people lived in the area at least 6,000 to 7,000 years ago. Oak and pinion trees, key food sources, are plentiful. There is good habitat for deer and other wildlife. One of the most important food resources was the agave, similar to the century plant.

Indians roasted the center part of the stock from young agave plants. Its taste and consistency are described as being similar to the yam but more fibrous. Leaves of the agave were pounded and the fibres taken for making nets and baskets.

The contractor for the McCain archeological sampling also will prepare a research design for follow-up studies.

The combined inventories underway during the summer are laying the groundwork for more intensive research in an area of fabulous archeological value. Every artifact found and understood will shed light, a little at a time, on Native Americans whose lifeways now are veiled by the unknown. □

*A team of archeologists is given a preview of the McCain Valley area where they later would comb 7,000 acres for evidence of prehistoric habitation.*





# Letters to the Editor

Letters requesting answers must  
include stamped self-addressed envelope

## Gasoline Hotline . . .

With the current concern on the gasoline situation, perhaps your readers might like to know that travelers, through or in New Mexico, may find out the availability of gasoline any place in the state by calling a toll free number, 1-800-432-6782. Names of specific stations are not given, but whether stations are open at night or on weekends. So far there has been no shortage in New Mexico, and no critical shortages are expected. The hot line is open from 8 a.m. to 5 p.m., Monday through Friday.

RUTH ARMSTRONG,  
Corrales, New Mexico.

## Enjoying "Way Back" Issues . . .

I just wanted to let you know how much we are enjoying reading the "way back" issues of *Desert* that arrived a short time ago. Every issue is filled with wonderful articles and "Tons" of information.

We look forward each month to receiving your excellent magazine and now these back issues are a special "treat"—what a combination!

Even though many of our trips are armchair ones (lately), we truly feel we've been to the various places that have been so well written about.

PHYLLIS R. LANE,  
Magalia, California.

## Missed the Train . . .

I was particularly interested in C. J. Burkhardt's article on Jerome in the July issue. That town always amazes me every time I drive through it.

I did find an error in the article. On page 26, the author states that a narrow gauge line, United Verde & Pacific, was built from Prescott to Ash Fork to link up with the Santa Fe. The UV&P was a narrow gauge line from what is now Chino Valley, which is about 15 miles north of here, to Jerome. The roadbed is now a road, which I intend taking some day. The line between Prescott and Ash Fork has always been standard gauge. Pardon the nit-picking.

LUKE R. SINCLAIR,  
Prescott, Arizona.

# Calendar of Events

This column is a public service and there is no charge for listing your event or meeting—so take advantage of the space by sending in your announcement. We must receive the information at least three months prior to the event.

SEPTEMBER 14-16, The Wasatch Gem Society will host the Utah Federation of Gem and Mineralogical Societies' annual convention, National Guard Armory, 5189 S. State, Murray, Utah. Free admission. This show was previously scheduled for September 7 through 9. Dealers, Demonstrations, Swap Tables, Competitive Exhibits, Special Displays.

SEPTEMBER 22 & 23, Harvest of Gems and Minerals, sponsored by the Sequoia Gem and Mineral Society, 1120 Roosevelt Ave., Redwood City, California. Demonstrations, displays, dealers.

SEPTEMBER 22 & 23, Mother Lode Mineralites' 16th Annual Show, "The Show That Shows How," Gold Country Fairgrounds, Auburn, California. Exhibits, demonstrations, slide shows, dealers, field trips. Free admission, parking and camping.

SEPTEMBER 22 & 23, 13th Annual "Magic in Rocks" show, sponsored by the El Monte Gem and Mineral Club, Inc., Masonic Temple, 4017 N. Tyler Ave., El Monte, Calif. Admission and parking free.

OCTOBER 2-14, Annual Show of the Fresno Gem and Mineral Society, Fresno Dist. Fair, East Kings Canyon Rd., and Chance Ave., Fresno, Calif. Admission to fair covers admission to show.

OCTOBER 6 & 7, The East Bay Mineral Society will present their annual Festival of Gems and Minerals, Scottish Rite Temple, 1547 Lakeside Dr., Oakland, Calif. Dealer space filled. Admission is charged.

OCTOBER 6 & 7, National Prospectors & Treasure Hunters Convention, sponsored by the Prospector's Club of Southern California, Inc., Galileo Hill Park, California City, Calif. Admission and parking free—everyone is invited to attend and participate. Noted guest speakers, latest equipment demonstrated by top manufacturers, organized free activities for children. Camping space available. A great family event. For information write S. T. Conatser, PCSC Convention Chairman, 2590 Fallon Circle, Simi Valley, Calif. 93065.

OCTOBER 6 & 7, Harvest of Gems, sponsored by the Centinela Valley Gem and Mineral Club, Hawthorne Memorial Center, El Segundo Blvd., and Prairie Ave., Hawthorne, Calif. Dealers, displays, demonstrations, ample free parking.

OCTOBER 13 & 14, 4th Gem & Mineral Show sponsored by the Sierra Pelona Rock Club, William S. Hart High School Cafeteria, 24825 N. Newhall Ave., Newhall, Calif. Admission 50 cents adults, children under 16 free. Dealers, Working demonstrations.

OCTOBER 13-14, a weekend of fun sponsored by the World-of-Rockhounds Association, Inc. The campsite is the American Progress Mining Claim. Take the Fort Irwin road out of Barstow, California for approximately 16.7 miles. There will be WRA signs marking the turn off—follow them to the campsite. Displays, field trips, auction, campfire activities.

OCTOBER 13 & 14, Gem and Mineral Show, San Jose "Rock Trails West," annual show of the Campbell Gem and Mineral Guild, Gateway Hall, Santa Clara, Fairgrounds on Tully Rd., Campbell, California.

OCTOBER 13-21, Fourth Annual Gem and Mineral & Handmade Hobby Jamboree, Sportsman's Club, 6225 Sunburst, Joshua Tree, California. Dealers, free admission and parking.

OCTOBER 20 & 21, Gem and Mineral Society of Whittier, California will hold their Annual Show, Palm Park Recreation Center, 5703 South Palm Avenue, Whittier, Calif. Free admission and parking. Outstanding displays.

OCTOBER 20 & 21, "Jasper Days '70" sponsored by the Coalinga Rockhound's Society, Inc., Sunset School Cafeteria, 1104 California St., Coalinga, Calif. Dealers, exhibits, camping available, admission free.

OCTOBER 26-28, Old Pueblo Lapidary & Gem Show, Community Center Exhibition Hall, 350 S. Church St., Tucson, Arizona.

NOVEMBER 3 & 4, Bear Gulch Rock Club 17th Annual Gem and Mineral Show, Masonic Hall, 1025 N. Vine, Ontario, Calif. Exhibits, demonstrations, dealer space filled. Free admission and parking.

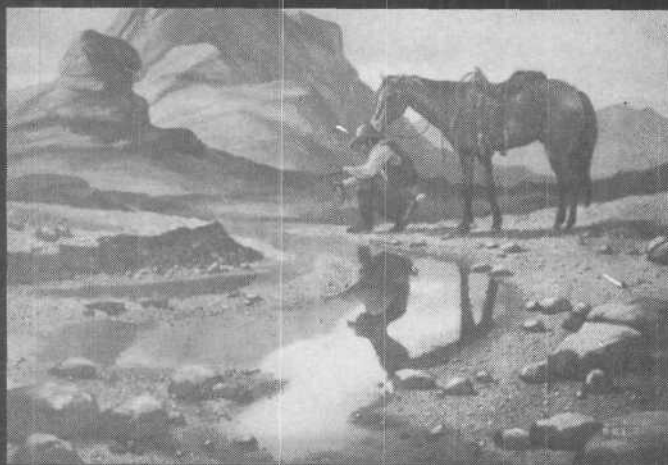
NOVEMBER 10 & 11, The Yucca Valley Gemfest featuring "Desert Rocks & Gems," presented by the Yucca Valley Gem & Mineral Society. The show will be held at the Community Center, 57098 29 Palms Highway, Yucca Valley, Calif. Admission free. Camping and good motels nearby.

NOVEMBER 10 & 11, Oxnard Gem and Mineral Society 10th Annual "Galaxy of Gems" Show, Oxnard Community Center, 800 Hobson Way, Oxnard, Calif. Exhibits, Dealers (spaces filled), Demonstrations. Free admission and parking.

# Visit our Intimate Gallery of Western Art

**FEATURING SELECTED WORKS OF  
OUTSTANDING ARTISTS INCLUDING:**

CARL G. BRAY  
ELBERT CHEYNO  
KINGSLEY OSMUND HARRIS  
KATHI HILTON  
MARGARET HUNTER  
WAYNE JUSTUS  
CHARLES LaMONK  
KENNETH MANSKER  
NORBERTO REYES  
PATRICIA SCARANO  
DAVID VILLASENOR  
JOE WAANO-GANO



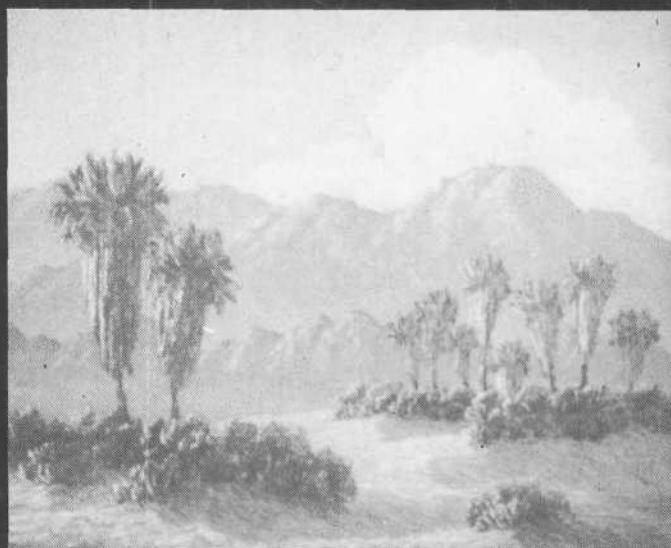
"Filling the Canteen" Oil, [24"x36"]

Norberto Reyes, AICA



"Palms and Rocks" Oil, [12"x16"]

Kingsley Osmund Harris



"Palms and Sunshine" Oil, [16"x20"]

Kathi Hilton

**DESERT MAGAZINE ART GALLERY**

74-425 Highway 111  
Palm Desert, California 92260